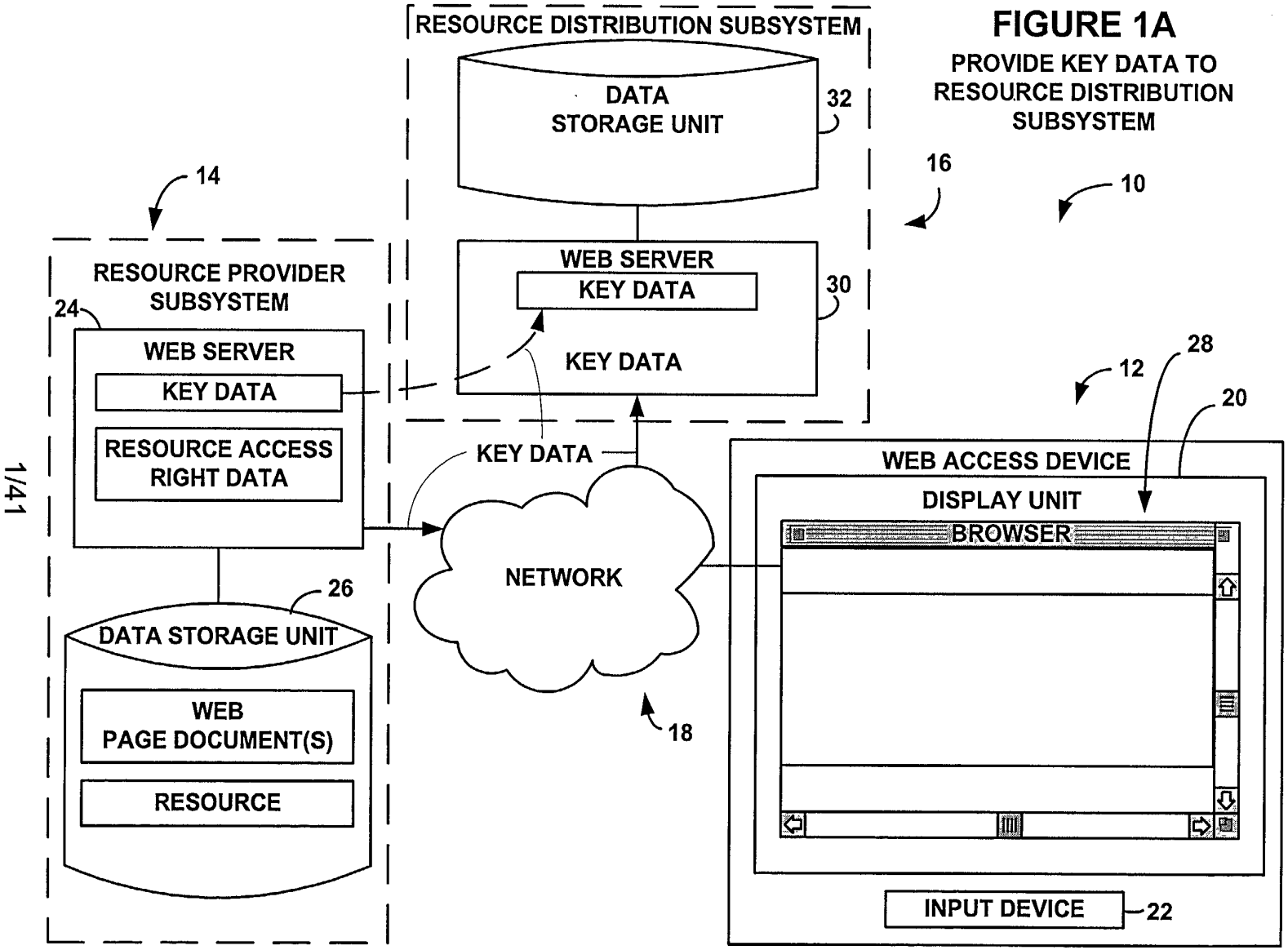


FIGURE 1A

PROVIDE KEY DATA TO RESOURCE DISTRIBUTION SUBSYSTEM

1/41

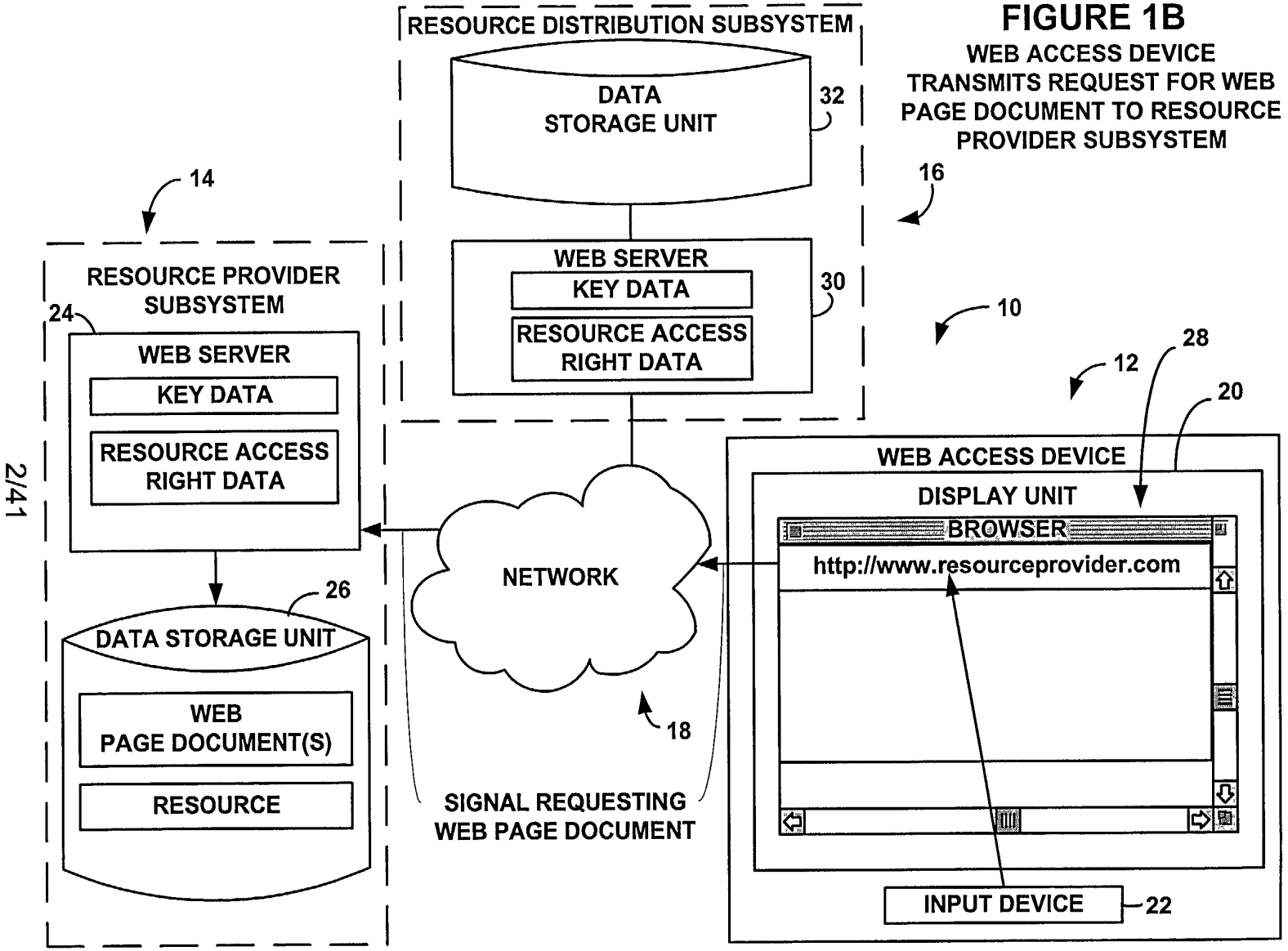


FIGURE 1B

WEB ACCESS DEVICE TRANSMITS REQUEST FOR WEB PAGE DOCUMENT TO RESOURCE PROVIDER SUBSYSTEM

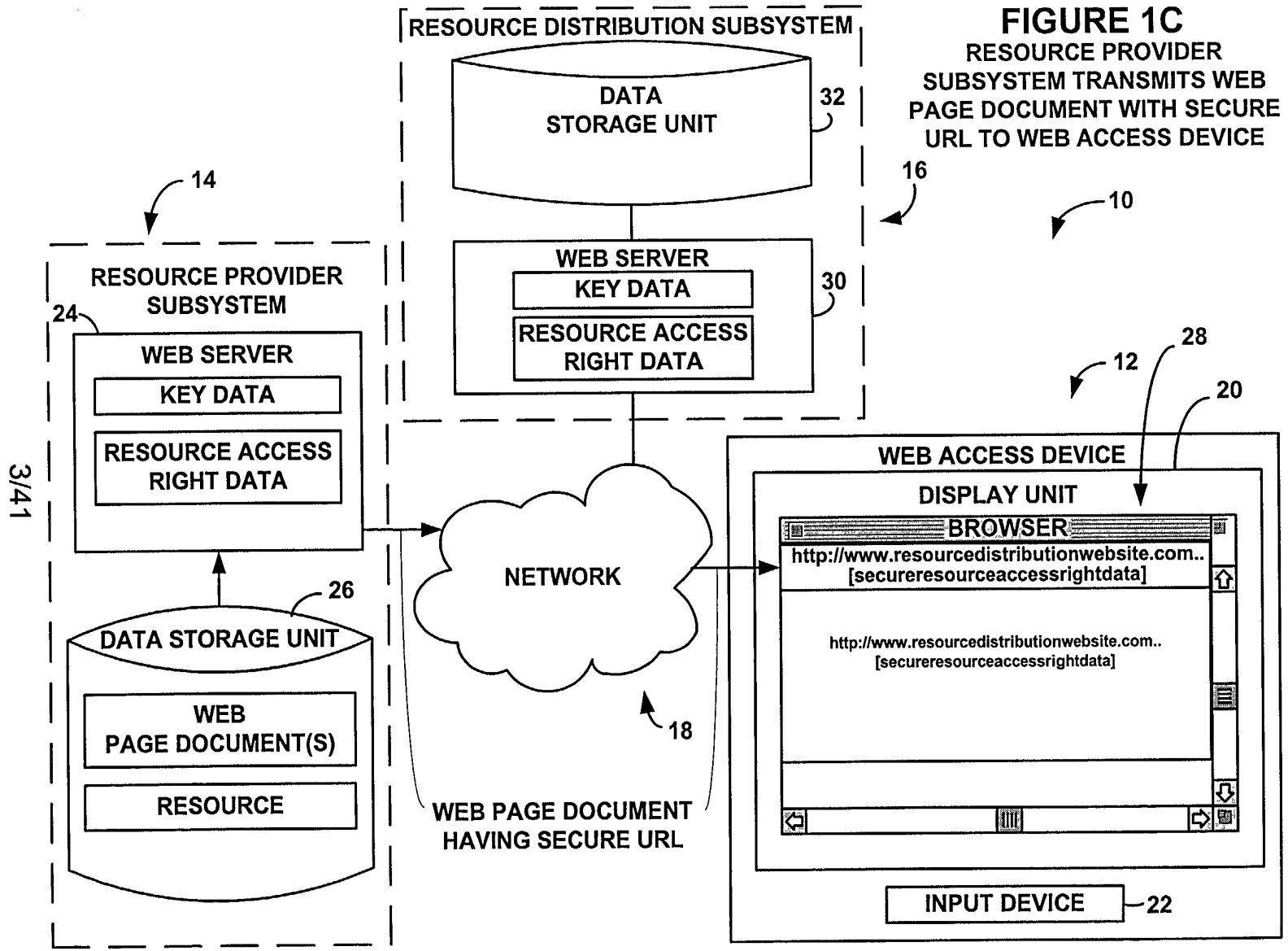


FIGURE 1C
RESOURCE PROVIDER SUBSYSTEM TRANSMITS WEB PAGE DOCUMENT WITH SECURE URL TO WEB ACCESS DEVICE

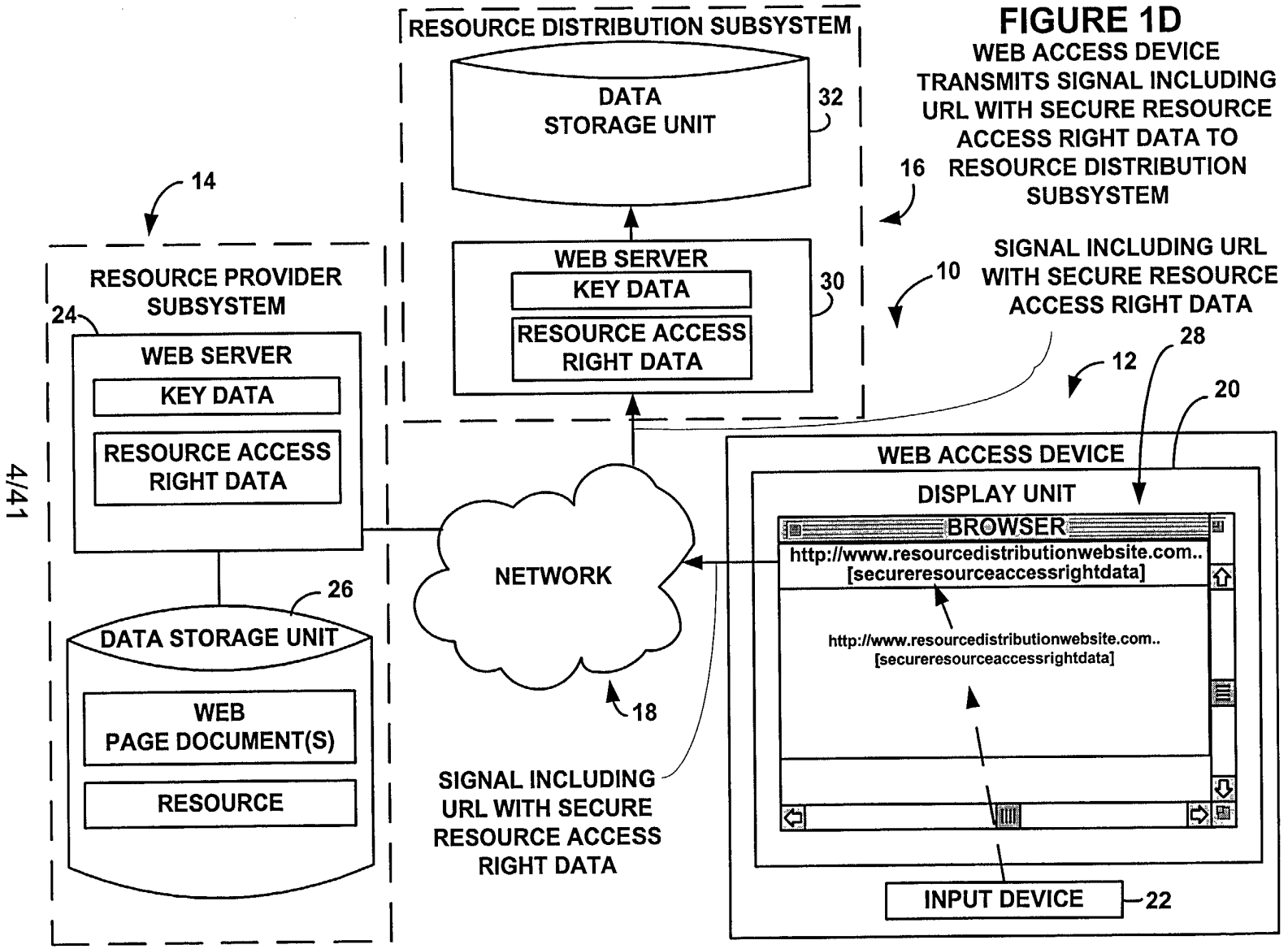


FIGURE 1D

WEB ACCESS DEVICE TRANSMITS SIGNAL INCLUDING URL WITH SECURE RESOURCE ACCESS RIGHT DATA TO RESOURCE DISTRIBUTION SUBSYSTEM

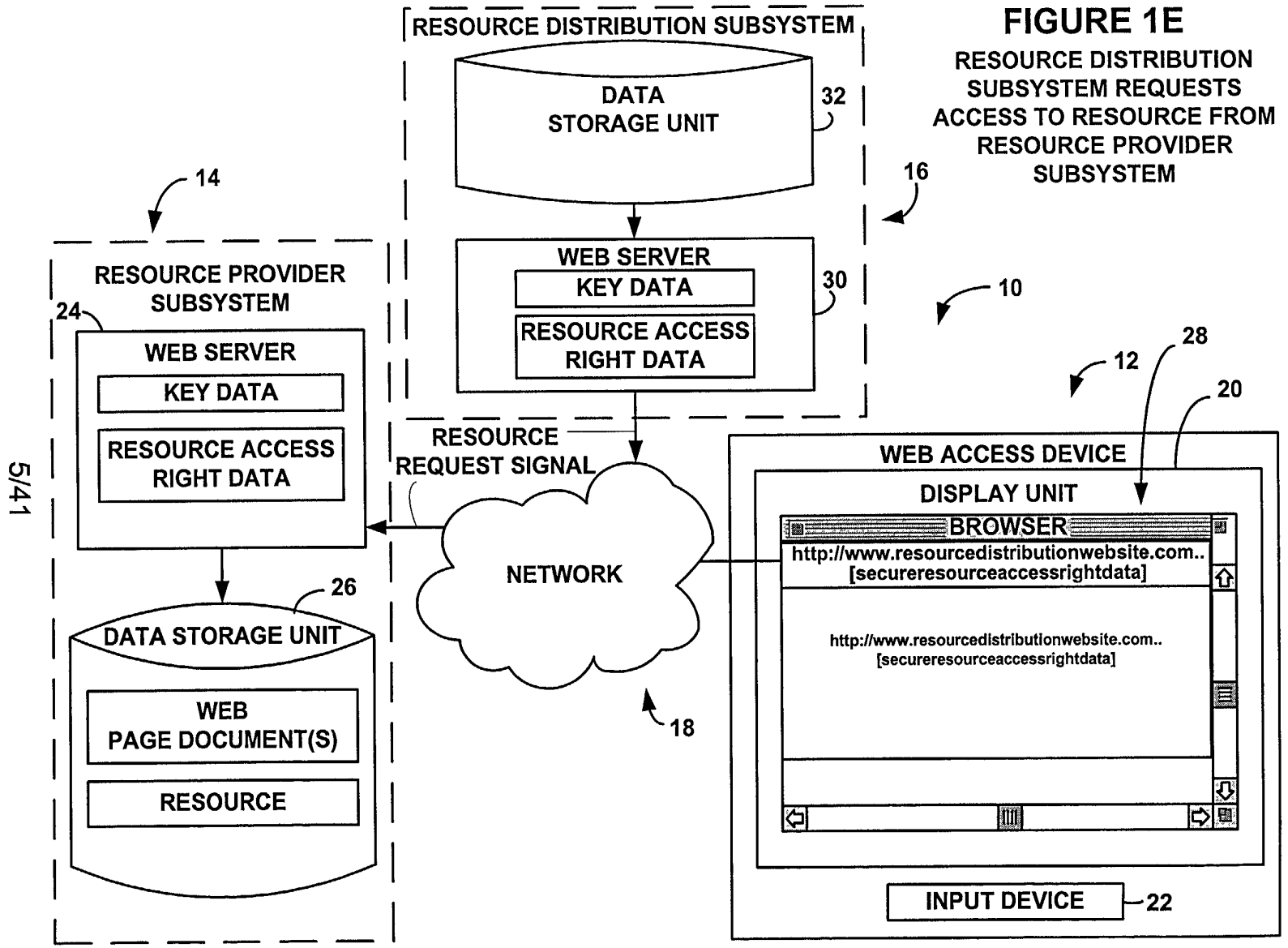


FIGURE 1E

RESOURCE DISTRIBUTION SUBSYSTEM REQUESTS ACCESS TO RESOURCE FROM RESOURCE PROVIDER SUBSYSTEM

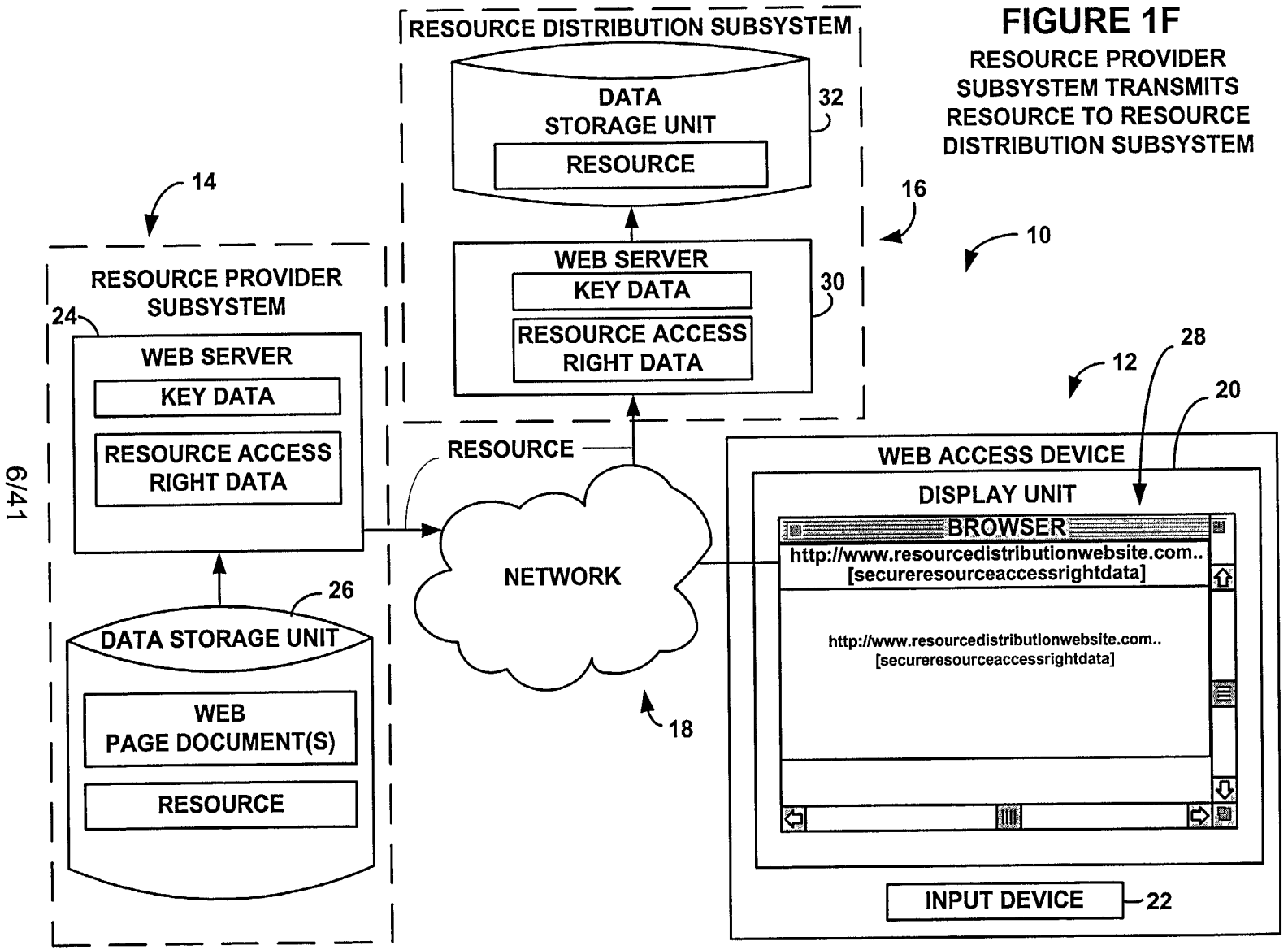


FIGURE 1F

RESOURCE PROVIDER SUBSYSTEM TRANSMITS RESOURCE TO RESOURCE DISTRIBUTION SUBSYSTEM

TOE080" 6022660

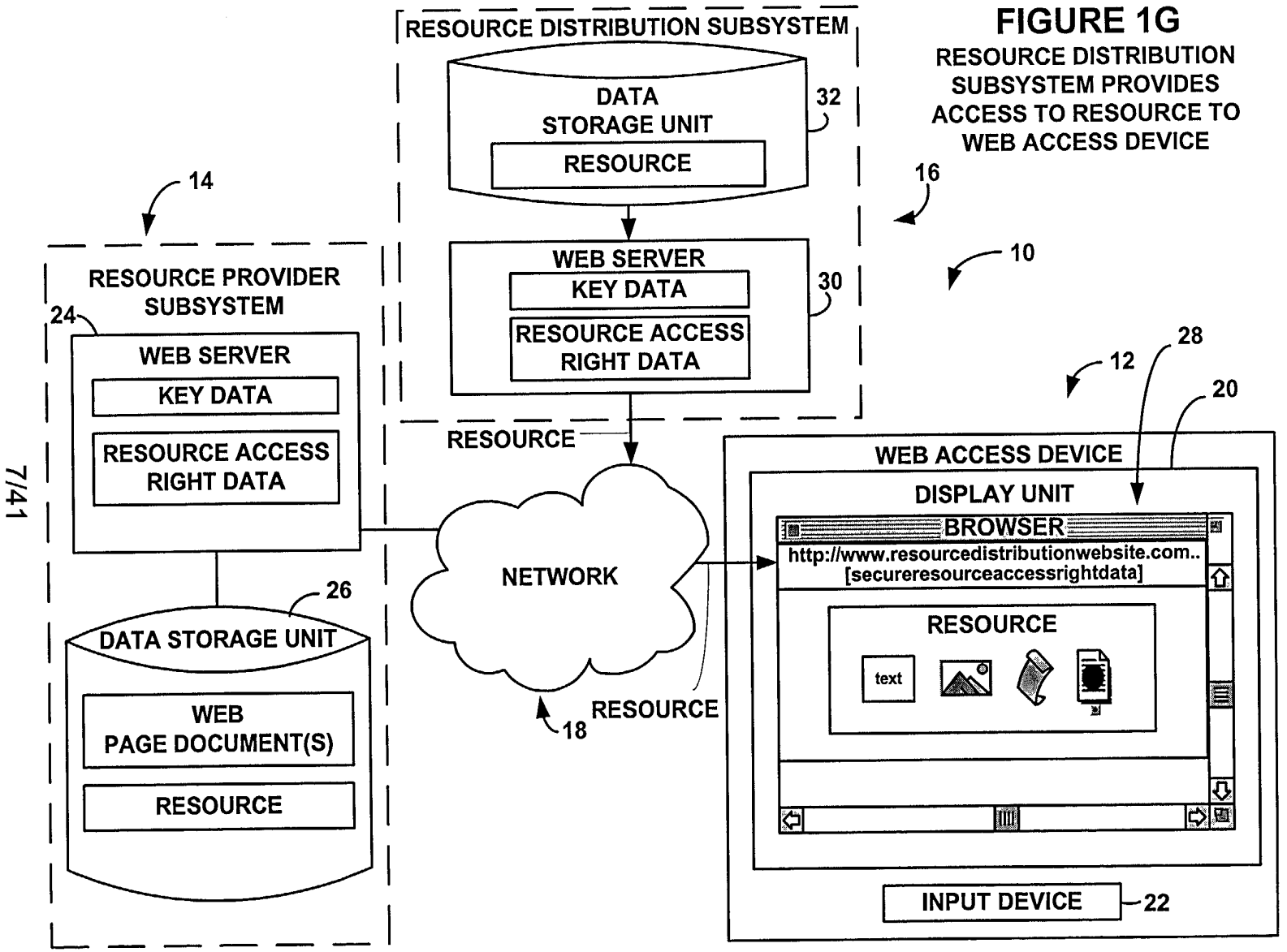


FIGURE 1G

RESOURCE DISTRIBUTION SUBSYSTEM PROVIDES ACCESS TO RESOURCE TO WEB ACCESS DEVICE

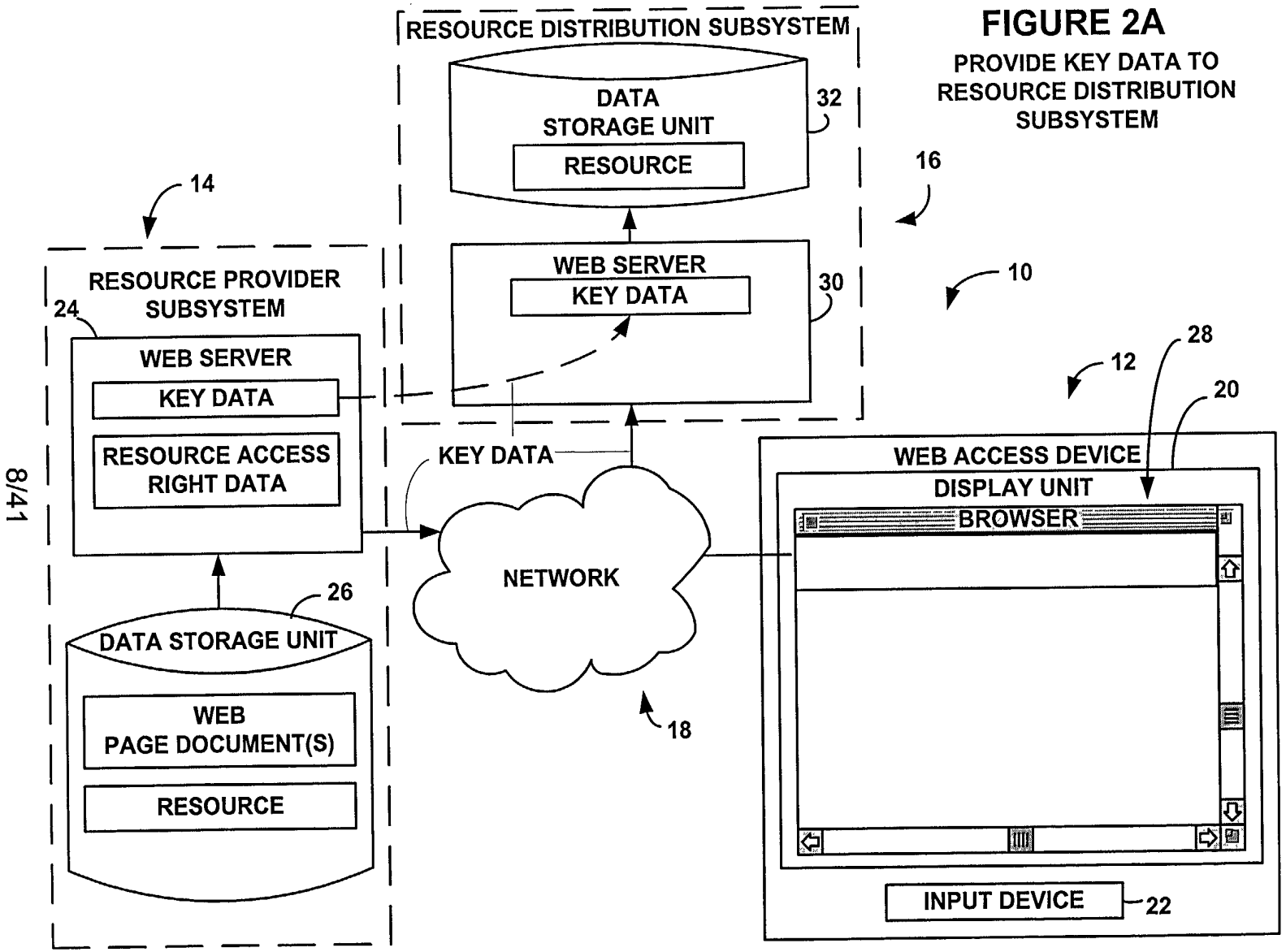


FIGURE 2A

PROVIDE KEY DATA TO RESOURCE DISTRIBUTION SUBSYSTEM

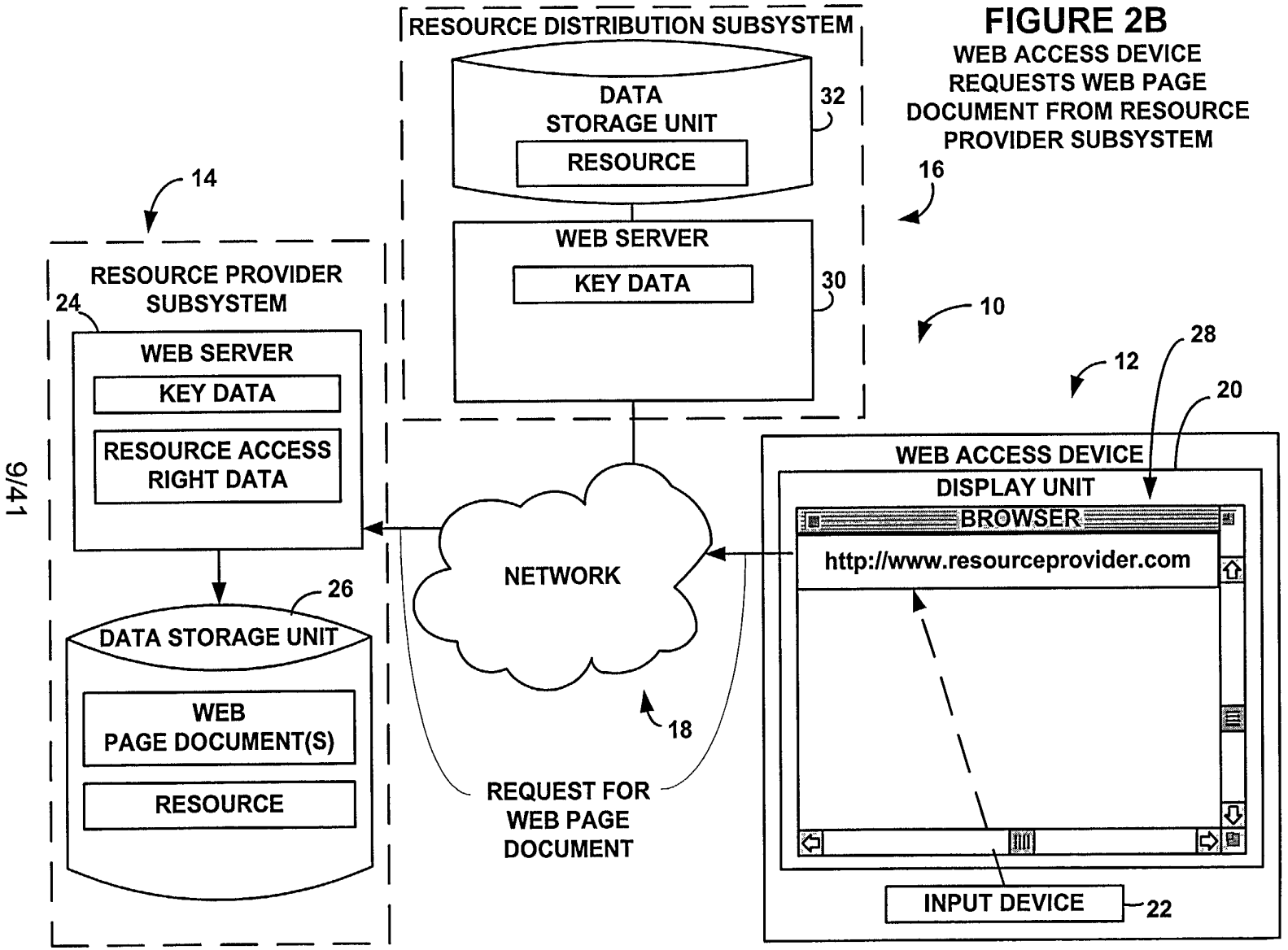


FIGURE 2B
WEB ACCESS DEVICE REQUESTS WEB PAGE DOCUMENT FROM RESOURCE PROVIDER SUBSYSTEM

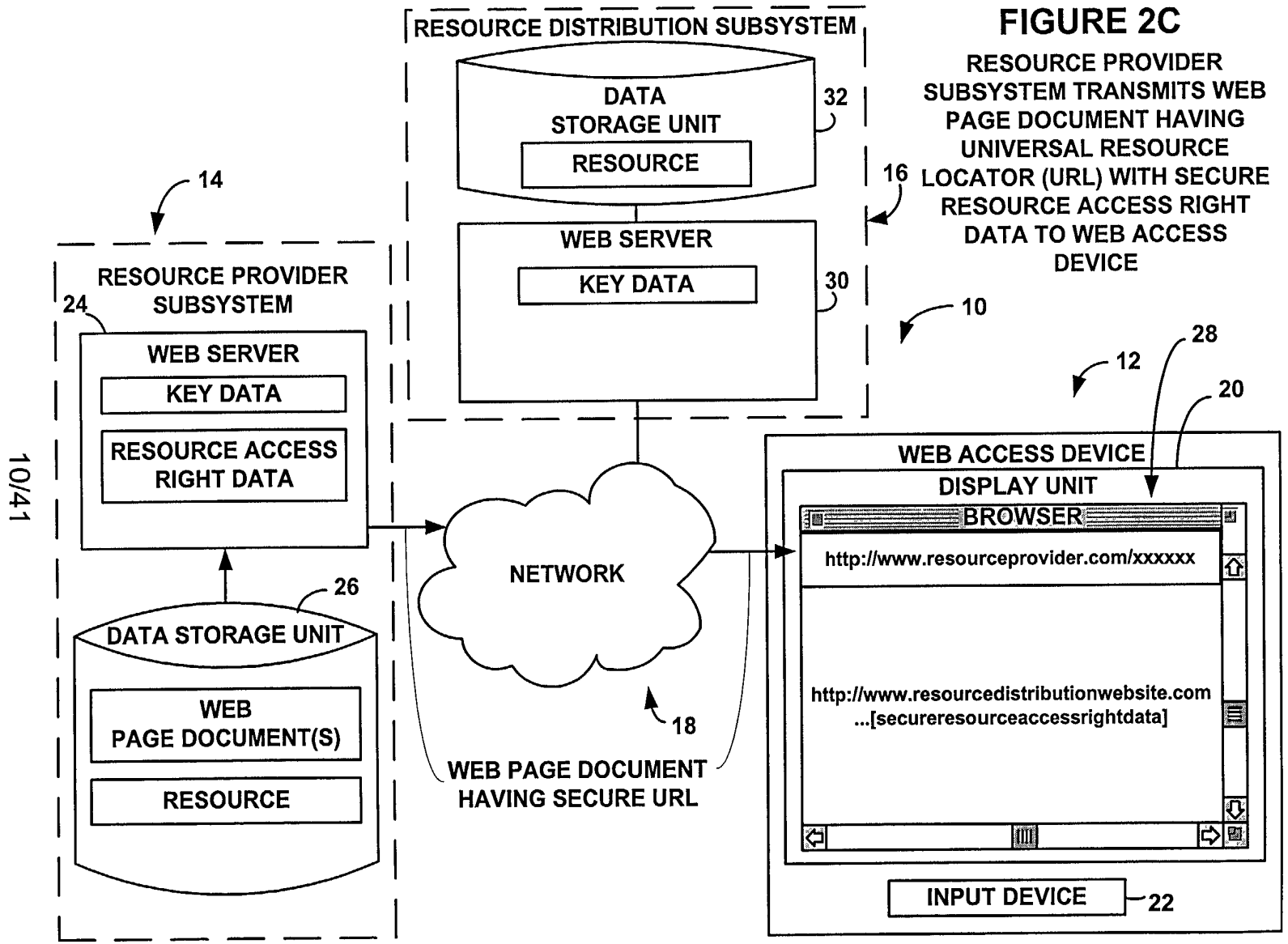


FIGURE 2C

RESOURCE PROVIDER SUBSYSTEM TRANSMITS WEB PAGE DOCUMENT HAVING UNIVERSAL RESOURCE LOCATOR (URL) WITH SECURE RESOURCE ACCESS RIGHT DATA TO WEB ACCESS DEVICE

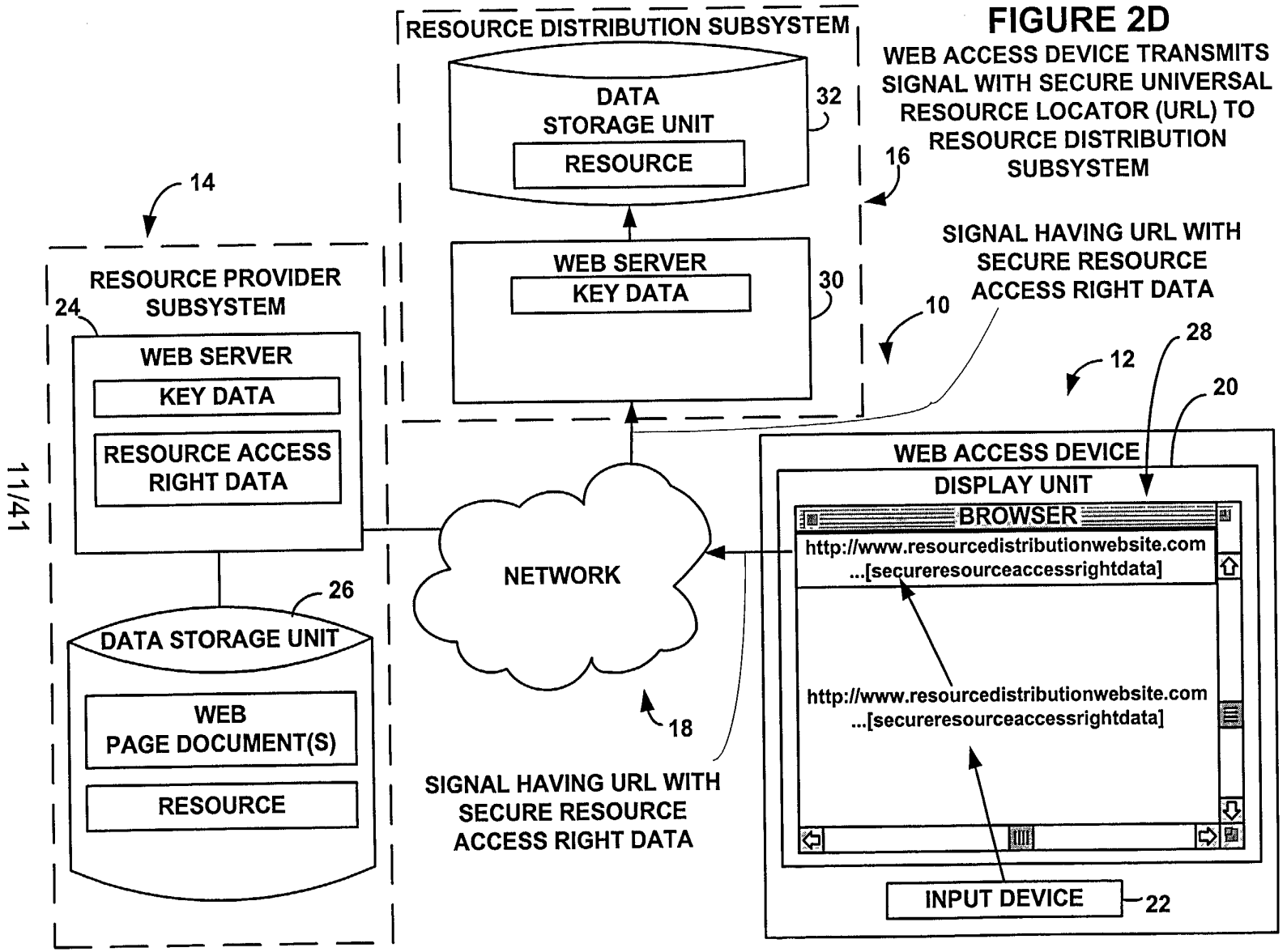


FIGURE 2D

WEB ACCESS DEVICE TRANSMITS SIGNAL WITH SECURE UNIVERSAL RESOURCE LOCATOR (URL) TO RESOURCE DISTRIBUTION SUBSYSTEM

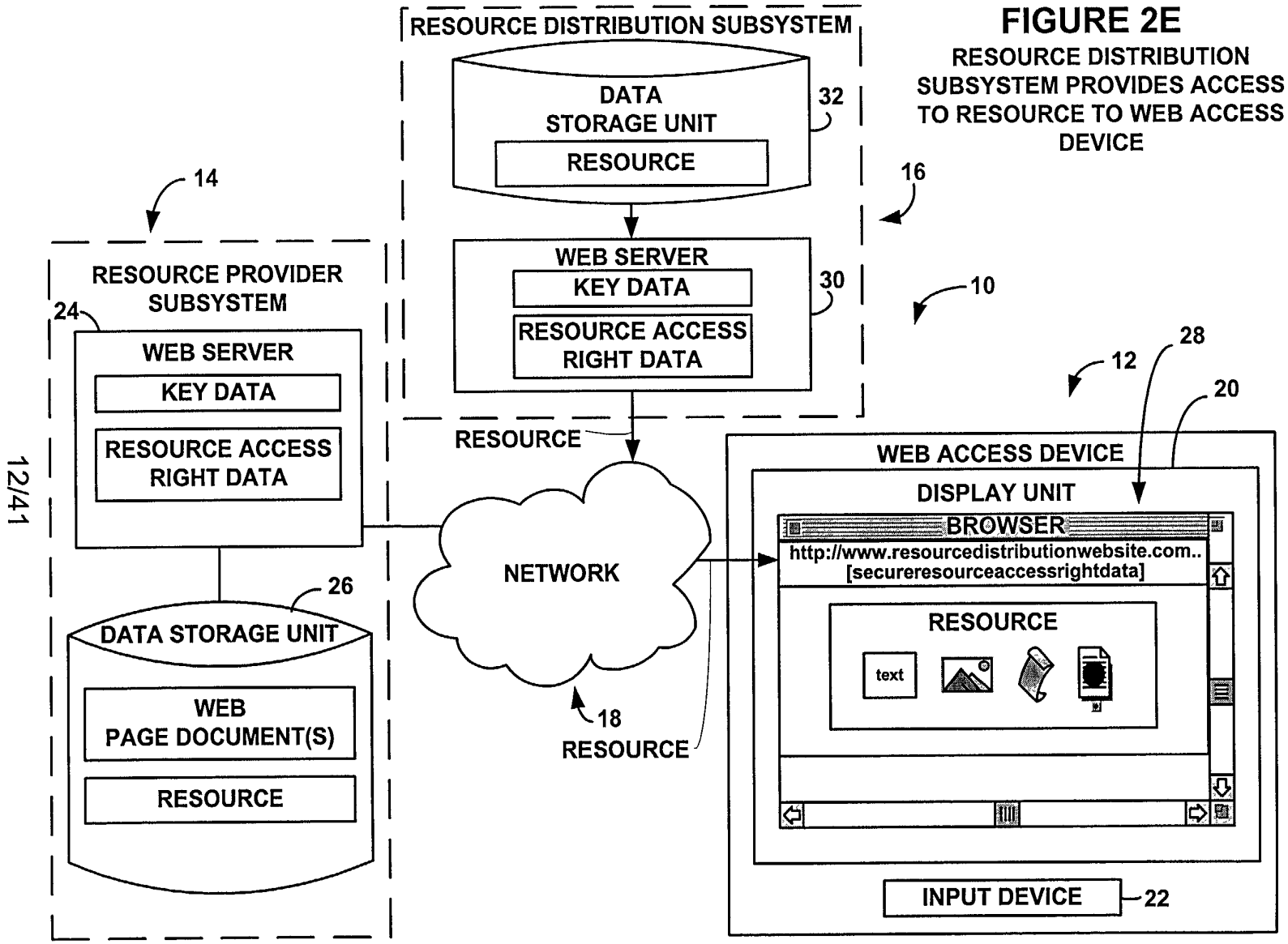


FIGURE 2E

RESOURCE DISTRIBUTION SUBSYSTEM PROVIDES ACCESS TO RESOURCE TO WEB ACCESS DEVICE

FIGURE 3

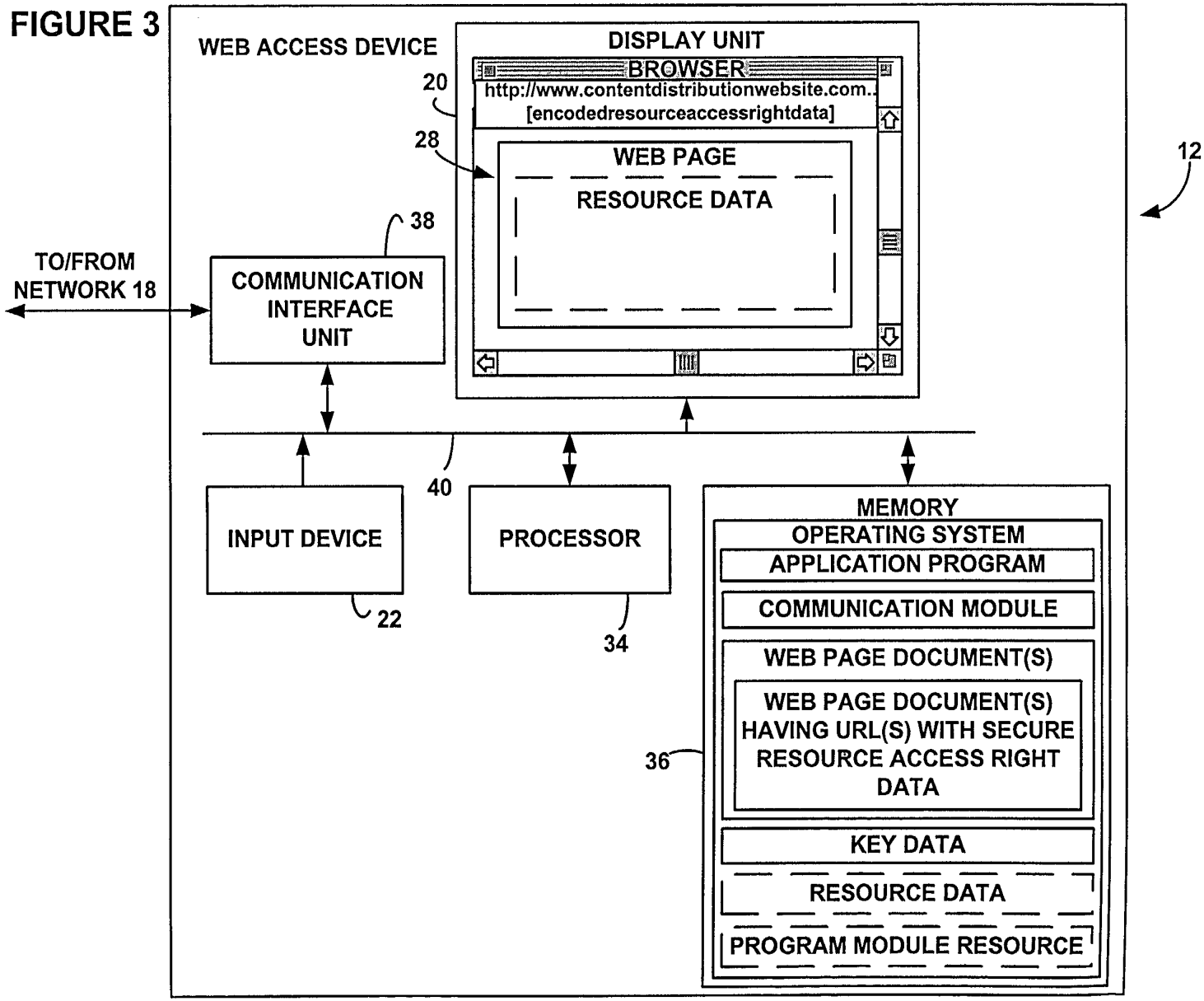

WEB ACCESS DEVICE
DISPLAY UNIT
BROWSER
20
http://www.contentdistributionwebsite.com..
[encodedresourceaccessrightdata]
28
WEB PAGE
RESOURCE DATA
12
38
TO/FROM
NETWORK 18
COMMUNICATION
INTERFACE
UNIT
40
INPUT DEVICE
22
PROCESSOR
34
MEMORY
OPERATING SYSTEM
APPLICATION PROGRAM
COMMUNICATION MODULE
WEB PAGE DOCUMENT(S)
WEB PAGE DOCUMENT(S)
HAVING URL(S) WITH SECURE
RESOURCE ACCESS RIGHT
DATA
36
KEY DATA
RESOURCE DATA
PROGRAM MODULE RESOURCE

FIGURE 4A

FLOWCHART OF PROCESSING PERFORMED BY WEB ACCESS DEVICE

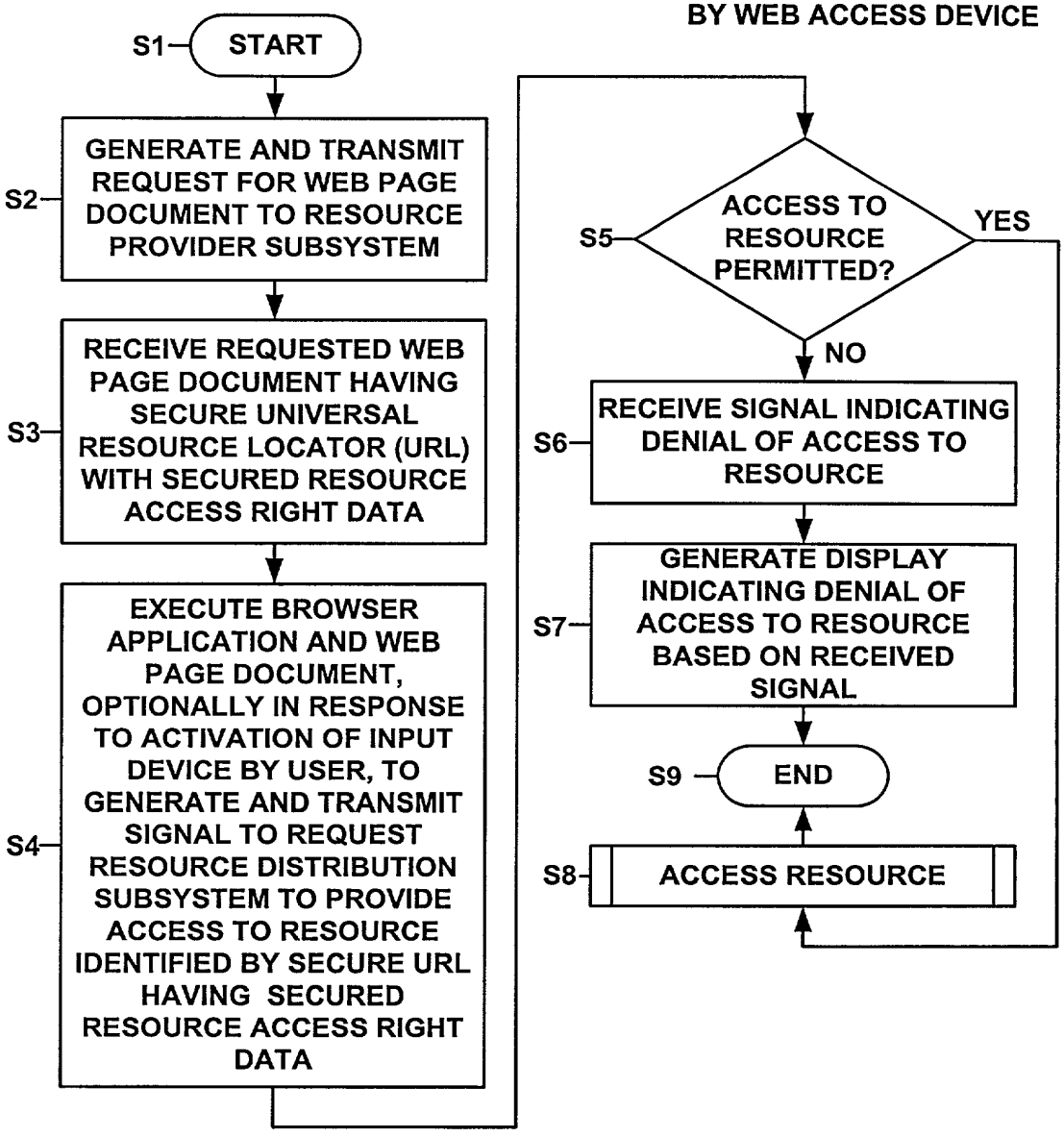
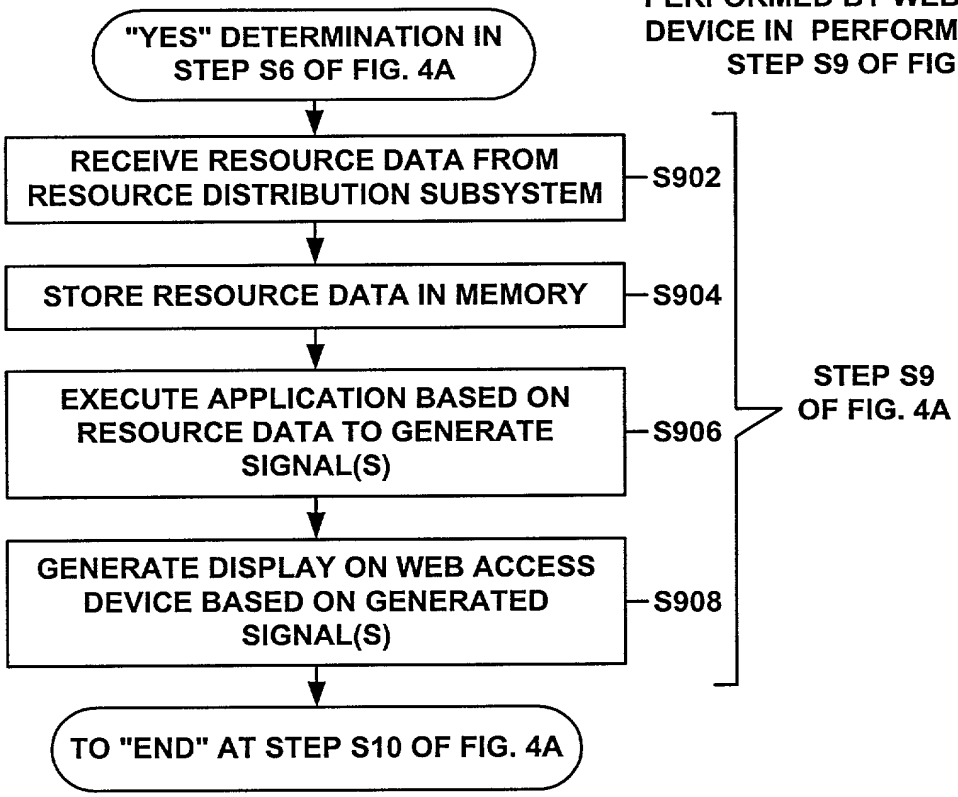


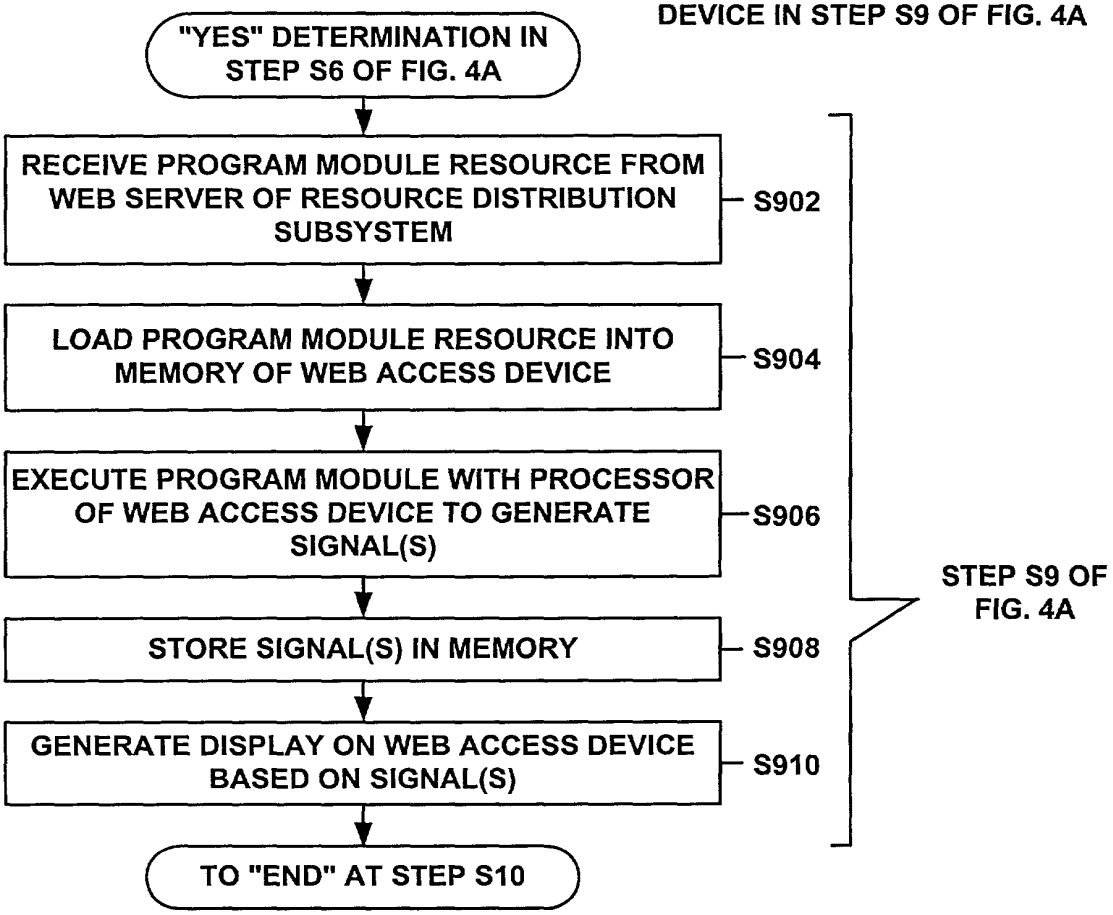
FIGURE 4B



Petitioner's Exhibit 1002

FIGURE 4C

SECOND VERSION OF PROCESSING PERFORMED BY WEB ACCESS DEVICE IN STEP S9 OF FIG. 4A



Docket No. 95222.0006

Patent Application Publication Oct. 26, 2006 Sheet 17 of 41 US 2006/0242278 A1

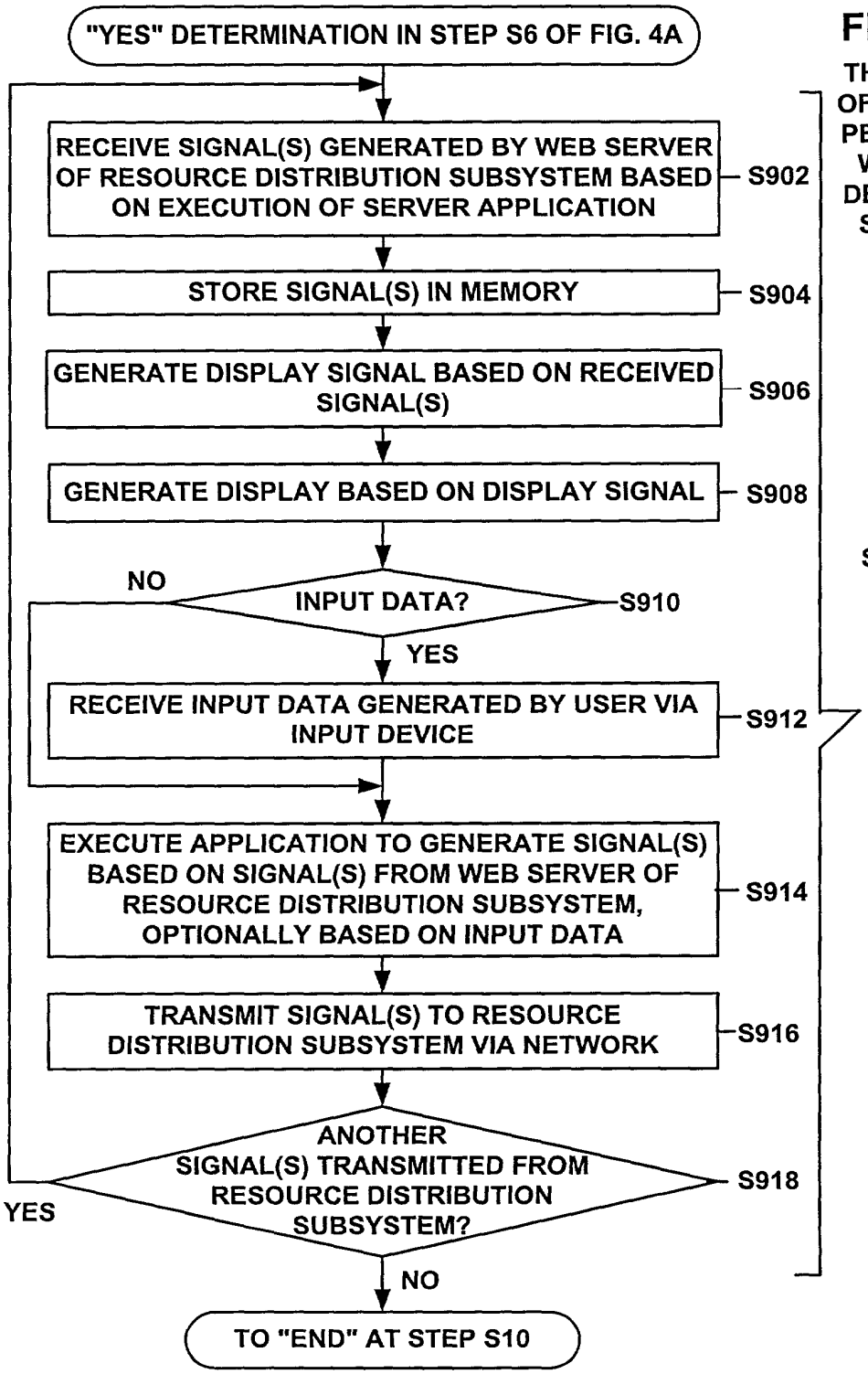


FIGURE 4D

THIRD VERSION OF PROCESSING PERFORMED BY WEB ACCESS DEVICE IN STEP S9 OF FIG. 4A

STEP S9 OF FIG. 4A

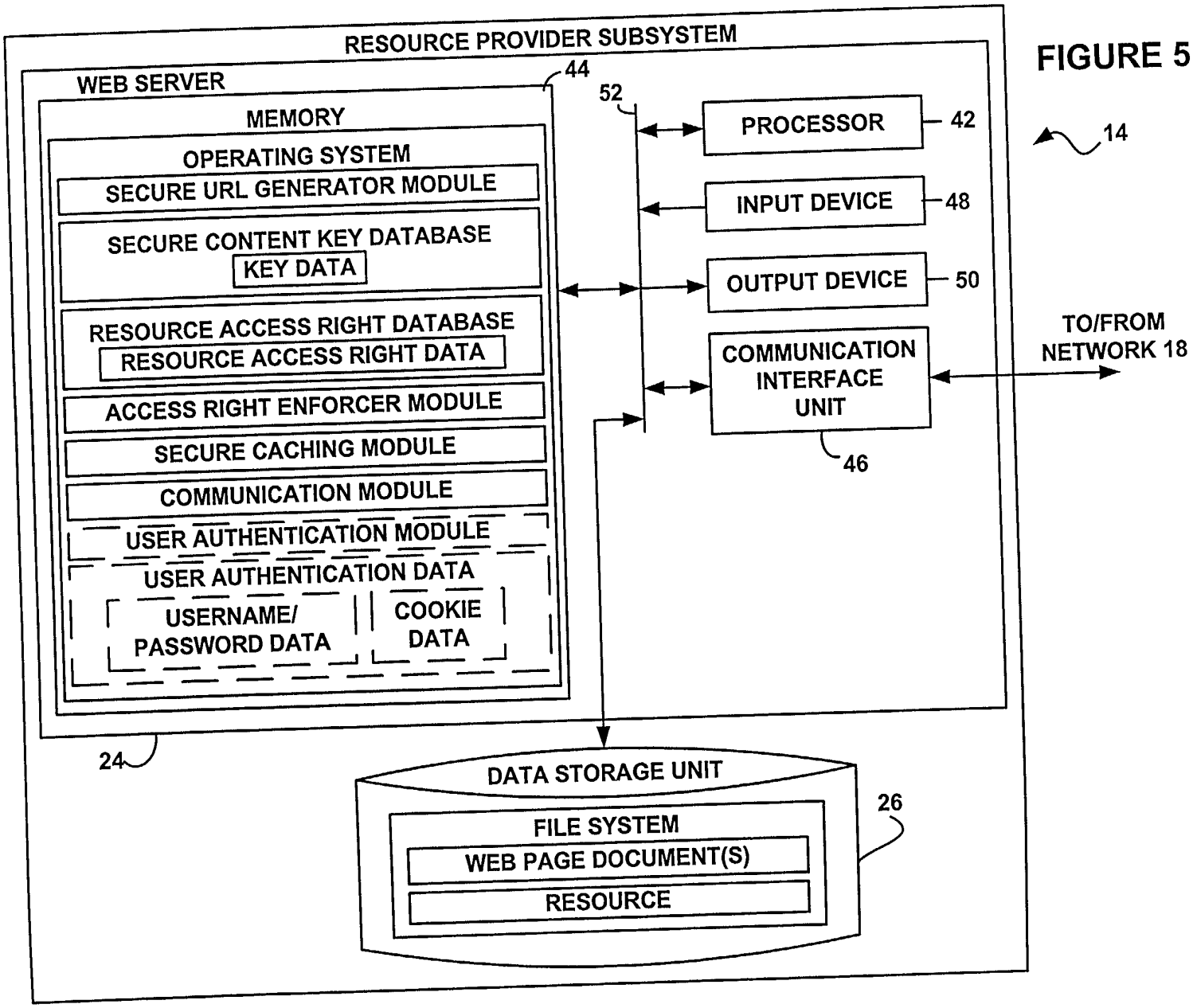

RESOURCE PROVIDER SUBSYSTEM
WEB SERVER
44
MEMORY
OPERATING SYSTEM
SECURE URL GENERATOR MODULE
SECURE CONTENT KEY DATABASE
KEY DATA
RESOURCE ACCESS RIGHT DATABASE
RESOURCE ACCESS RIGHT DATA
ACCESS RIGHT ENFORCER MODULE
SECURE CACHING MODULE
COMMUNICATION MODULE
USER AUTHENTICATION MODULE
USER AUTHENTICATION DATA
USERNAME/ PASSWORD DATA
COOKIE DATA
24
52
PROCESSOR
42
INPUT DEVICE
48
OUTPUT DEVICE
50
COMMUNICATION INTERFACE UNIT
46
TO/FROM NETWORK 18
DATA STORAGE UNIT
26
FILE SYSTEM
WEB PAGE DOCUMENT(S)
RESOURCE
14

FIGURE 5

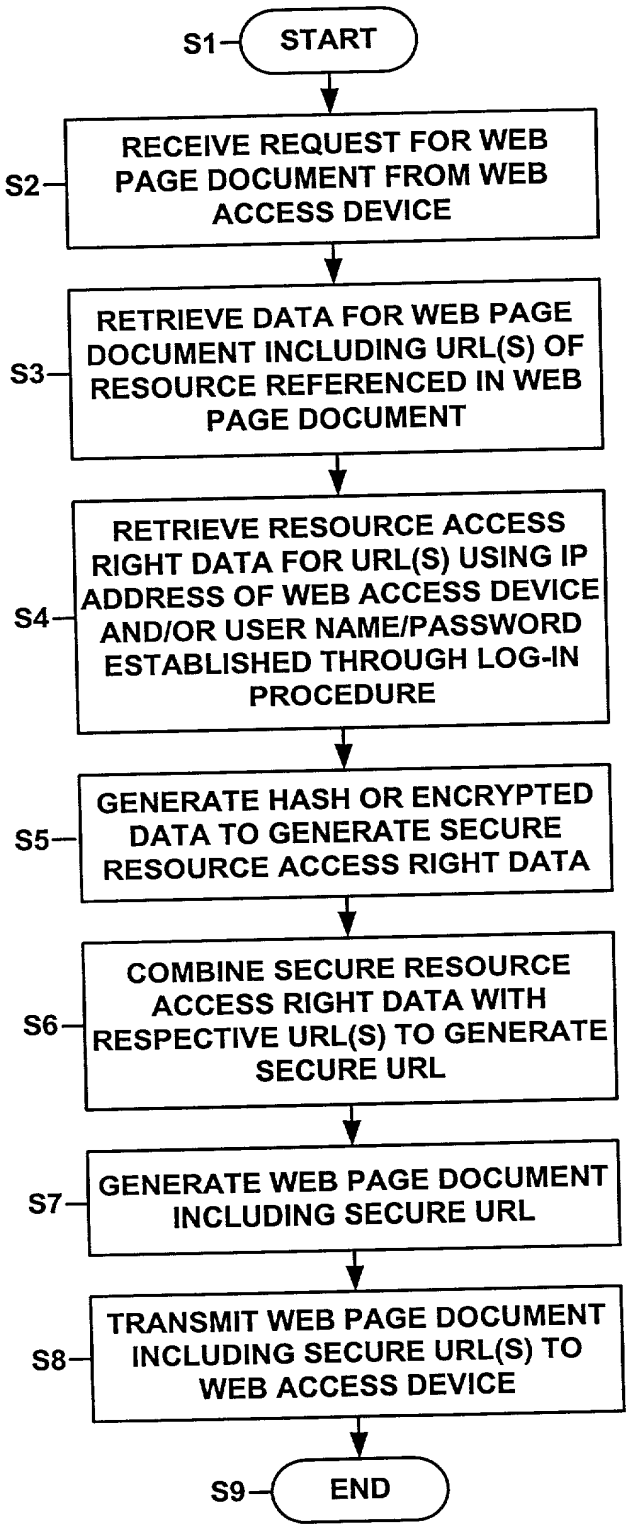
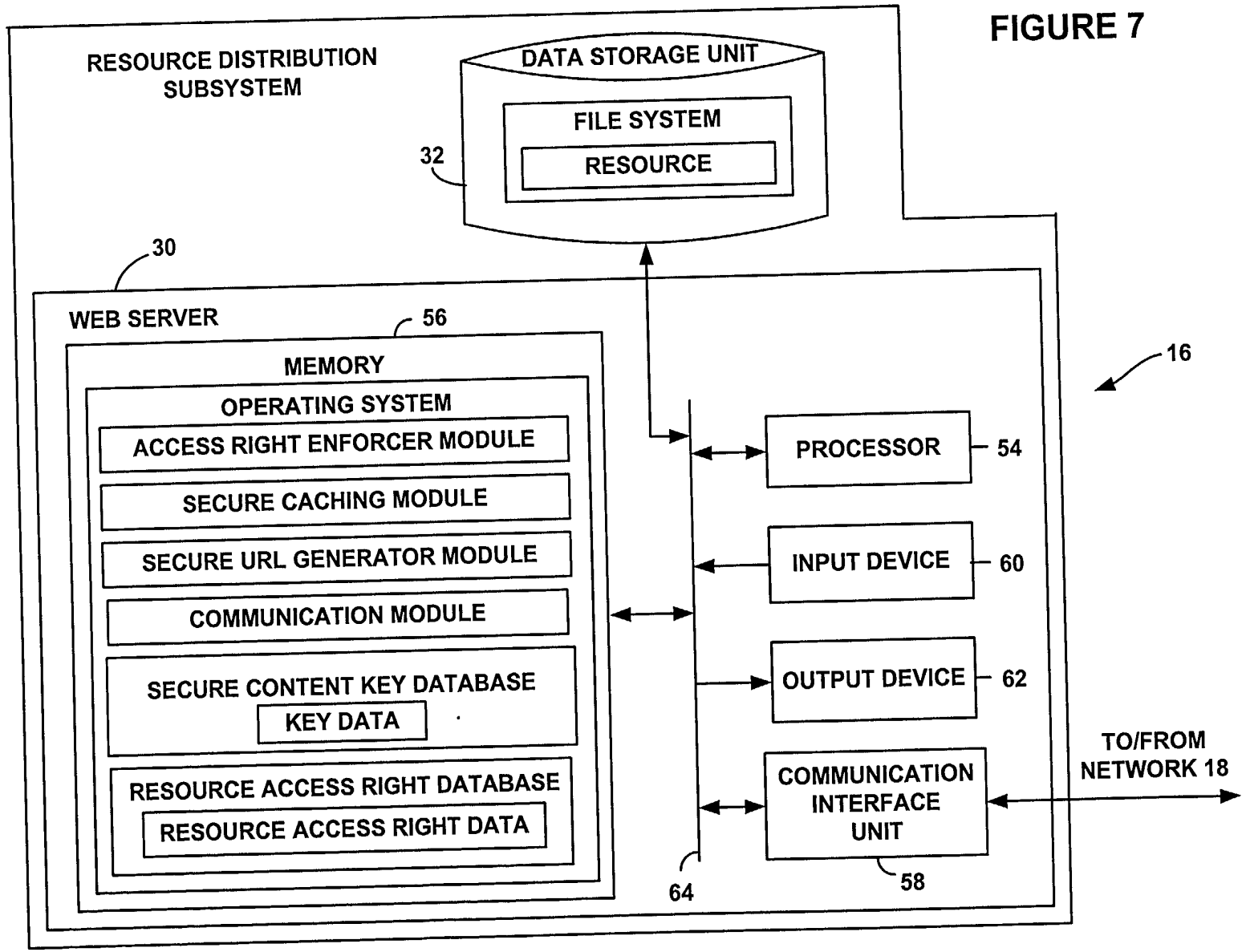


FIGURE 6
PROCESSING PERFORMED BY RESOURCE PROVIDER SUBSYSTEM

FIGURE 7


RESOURCE DISTRIBUTION SUBSYSTEM
DATA STORAGE UNIT
FILE SYSTEM
RESOURCE
32
30
WEB SERVER
56
MEMORY
OPERATING SYSTEM
ACCESS RIGHT ENFORCER MODULE
SECURE CACHING MODULE
SECURE URL GENERATOR MODULE
COMMUNICATION MODULE
SECURE CONTENT KEY DATABASE
KEY DATA
RESOURCE ACCESS RIGHT DATABASE
RESOURCE ACCESS RIGHT DATA
16
PROCESSOR
54
INPUT DEVICE
60
OUTPUT DEVICE
62
COMMUNICATION INTERFACE UNIT
58
64
TO/FROM NETWORK 18

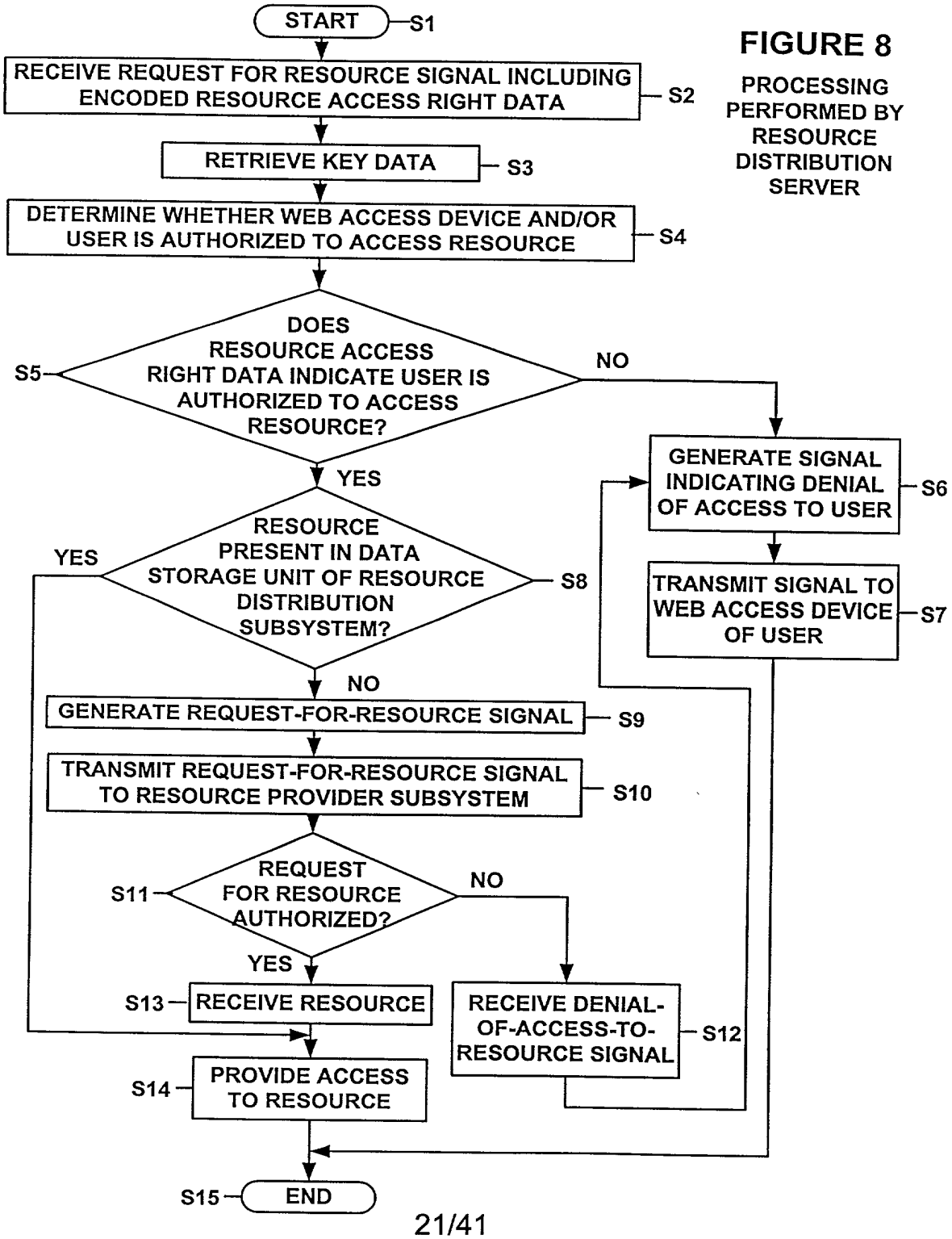


FIGURE 8

PROCESSING PERFORMED BY RESOURCE DISTRIBUTION SERVER

FIGURE 9A
SECURE CONTENT KEY DATABASE

KEY DATA	URL / RESOURCE PROVIDER IDENTIFICATION DATA	VALIDATE WEB ACCESS DEVICE/ USER REQUEST	RETRIEVE RESOURCE	START DATE/TIME DATA FOR KEY	END DATE/TIME DATA FOR KEY
8A1C37D2A925F45C 457D2694EA487987	123.45.67.89	1	1	5.29.2000 23:00:00.00	6.15.2000 23:00:00.00
D750CA0387E34019 274A6107DB40638A 4601A5CD8364857E BA83401756AC7ED4	0	1	0	1.1.2000 00:00:00.00	1.1.2001 00:00:00.00
• • •	• • •	• • •	• • •	• • •	• • •
6D3901CBA0395789 206598B93412ABE3	55.65.87.51	0	1	1.1.2000 00:00:00.00	1.1.2001 00:00:00.00

FIGURE 9B
SECURE CONTENT KEY DATABASE (CONTINUED)

LIFE SPAN DATA	KEY INDEX DATA	HASH IDENTIFIER DATA	ENCRYPTION MODEL DATA	ENCRYPTION ALGORITHM DATA	FORMAT FIELDS DATA
5.29.2000 23:00:00.00 360:00:00.00	2	3	010	001	12
8784:00:00.00	1	2	001	001	12
• • •	• • •	• • •	• • •	• • •	• • •
8784:00:00.00	3	1	010	100	12

FIGURE 9C
RESOURCE ACCESS RIGHT DATABASE

AUTHORIZED IP ADDRESS/ ADDRESS RANGE	IP ADDRESS OF RESOURCE PROVIDER SERVER	RETRIEVAL KEY DATA	LIFESPAN DATA FOR DATA ACCESS FOR URL	MAXIMUM REFERENCE DATA	REFERENCE COUNT DATA
55.10.13.00	55.134.162.34	9A5B394039384CD8 BE3C6A8721DB482D	5.29.2000 00:00:00.00 360:00:00.00	0008	0006
55.10.12.00- 55.10.12.255	0	195A845BE7F304FD 1F7A36B9477BB463	4.23.2000 00:00:00.00 8784:00:00.00	0001	0000
• • •	• • •	• • •	• • •	• • •	
55.10.15.00 - 55.10.15.255	32.84.93.126 32.29.41.128	FDC3495867FD341A A7C848B8D8EE8230	8.24.2000 00:00:00.00 8784:00:00.00	0010	0001

FIGURE 10A

SECURE URL HAVING WITH RESOURCE ACCESS RIGHT DATA APPENDED ARGUMENT APPROACH

HEADER	DESTINATION	DATA REQUEST FIELD(S)	SEPARATOR	IP ADDRESS
http://	www.content-server.com	/path1/path2/file.ext	?	ip= 1.2.3.4

SEPARATOR	HASH DATA	AUTHORIZED IP ADDRESS RANGE	IP ADDRESS OF RESOURCE PROVIDER	RETRIEVAL KEY DATA
&	hash= ACD54CD3D8E CA892ACB34E4 B5D1C8C38	address-range= 55.10.12.00 - 55.10.12.255	rps= 52.10.18.00	key= 9AF371AC 047C985D E407128A CB497D4B

LIFESPAN DATA	MAXIMUM REFERENCE DATA	FORMAT FIELD DATA	KEY INDEX DATA	HASH/ENCRYPTION MODEL DATA	HASH/ENCRYPTION ALGORITHM DATA
lifespan= 6.29.2005 00:00:00.00 72:00:00.00	maximum reference= 0008	format= 100	keyindex= 011	model= 010	algorithm= 111

FIGURE 10B

SECURE URL HAVING ENCODED RESOURCE ACCESS RIGHT DATA FORMATTED PATH APPROACH

HEADER	DESTINATION	DATA REQUEST FIELD(S)	SEPARATOR	IP ADDRESS INDICATOR	IP ADDRESS
http://	www.content-server.com	/ACD54CD3D8ECA892ACB34E4B5D1C8C/path1/path2/file.ext	?	ip=	1.2.3.4

AUTHORIZED IP ADDRESS RANGE	IP ADDRESS OF RESOURCE PROVIDER	RETRIEVAL KEY DATA	LIFESPAN DATA
address-range= 55.10.12.00 - 55.10.12.255	rps= 52.10.18.00	key= 9AF371AC 047C985D E407128A CB497D4B	lifespan= 6.29.2005 00:00:00.00 72:00:00.00

MAXIMUM REFERENCE DATA	KEY INDEX DATA	FORMAT FIELD DATA	HASH/ENCRYPTION MODEL DATA	HASH/ENCRYPTION ALGORITHM DATA
maximum reference= 0008	key index= 011	format= 100	model= 010	algorithm= 111

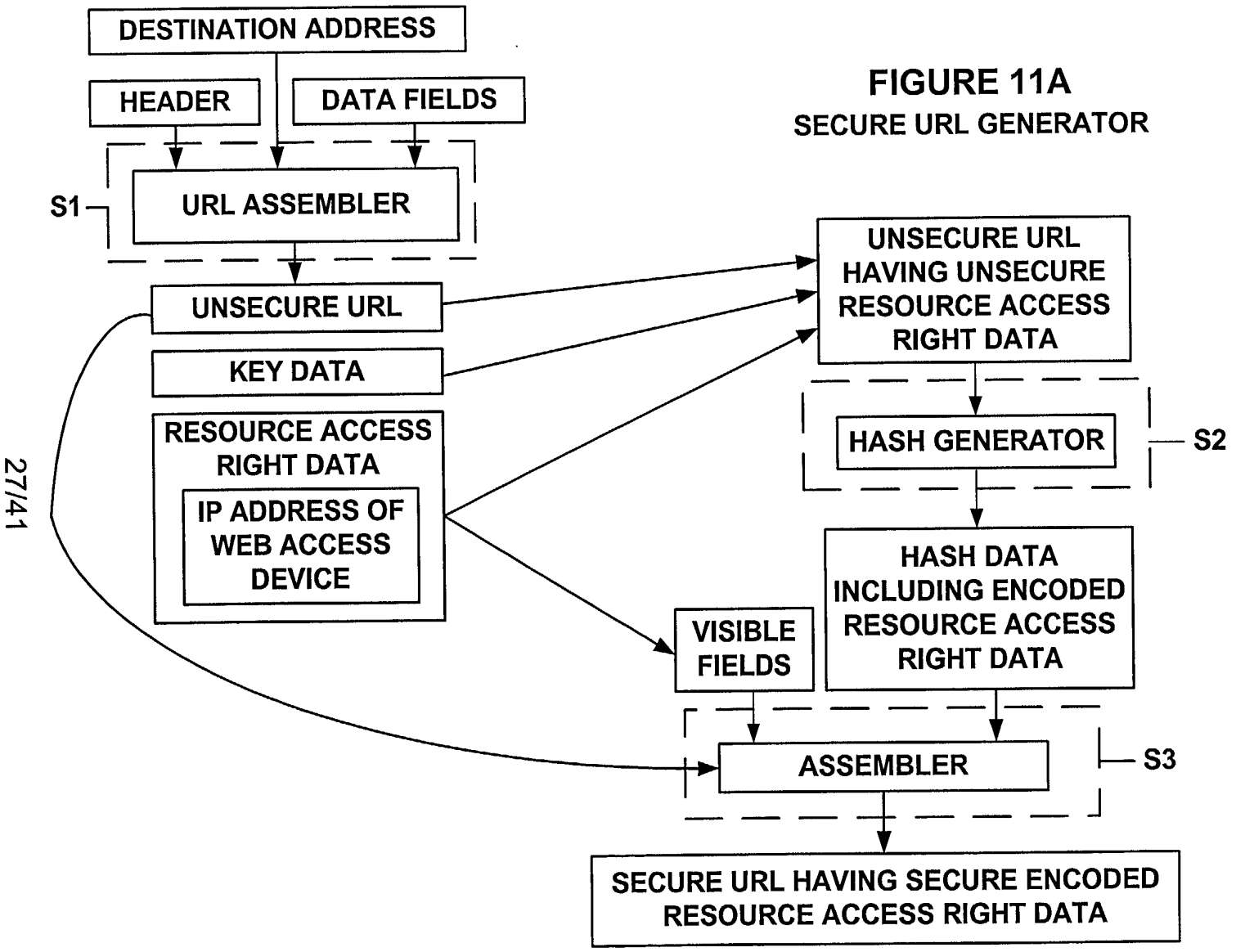


FIGURE 11A
SECURE URL GENERATOR

FIGURE 11B

WEB PAGE ASSEMBLER

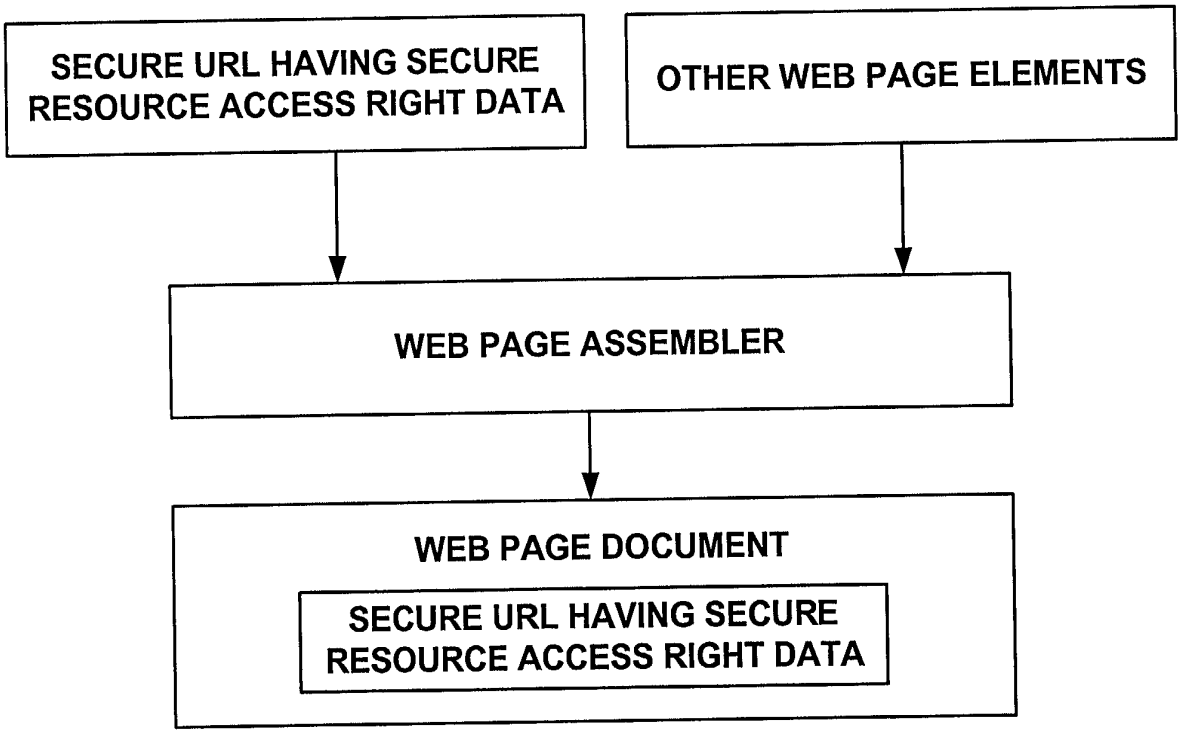


FIGURE 12 RIGHTS MANAGEMENT ENFORCER

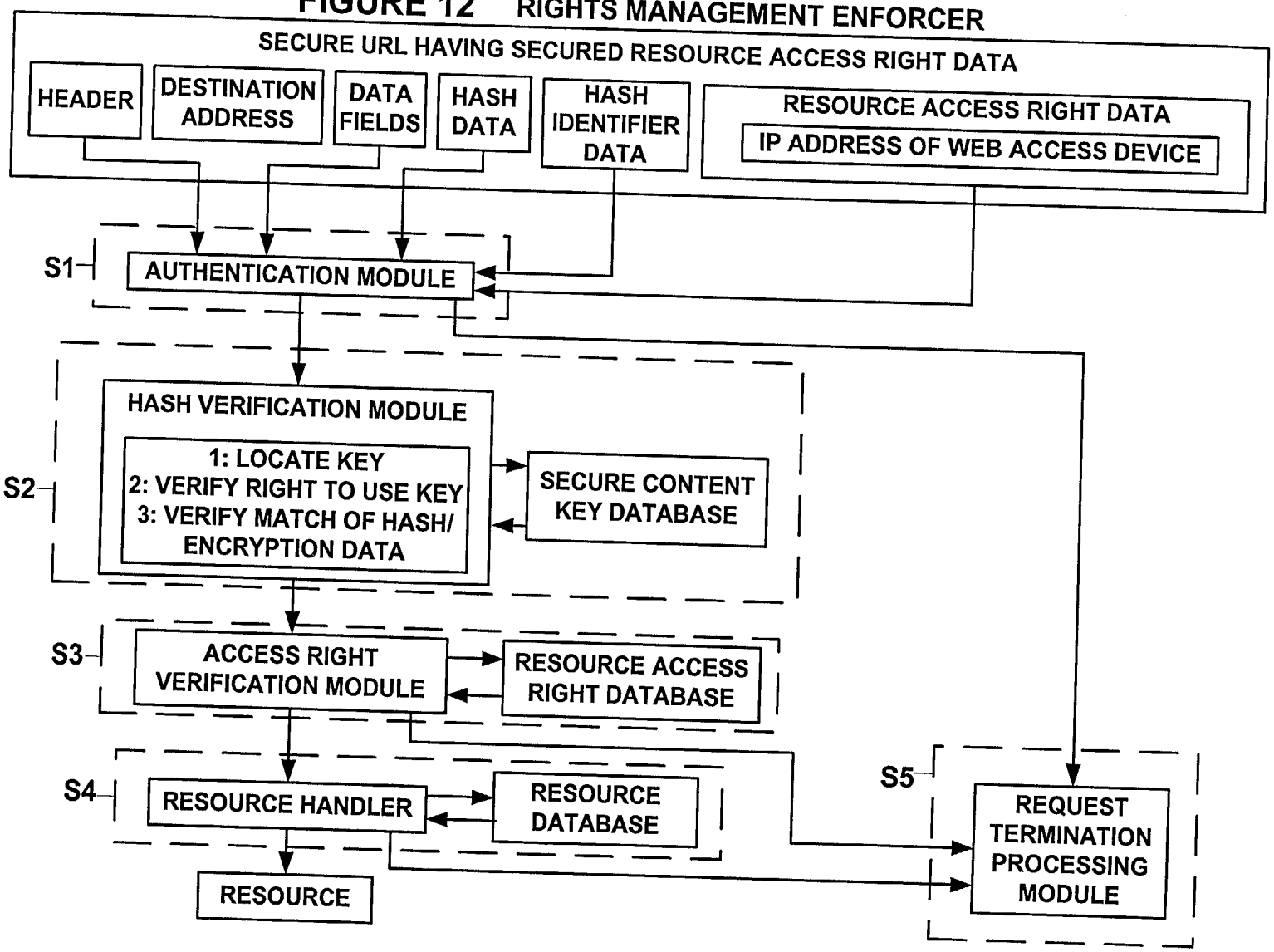


FIGURE 13A

AUTHENTICATION OF IP ADDRESS OF WEB ACCESS DEVICE

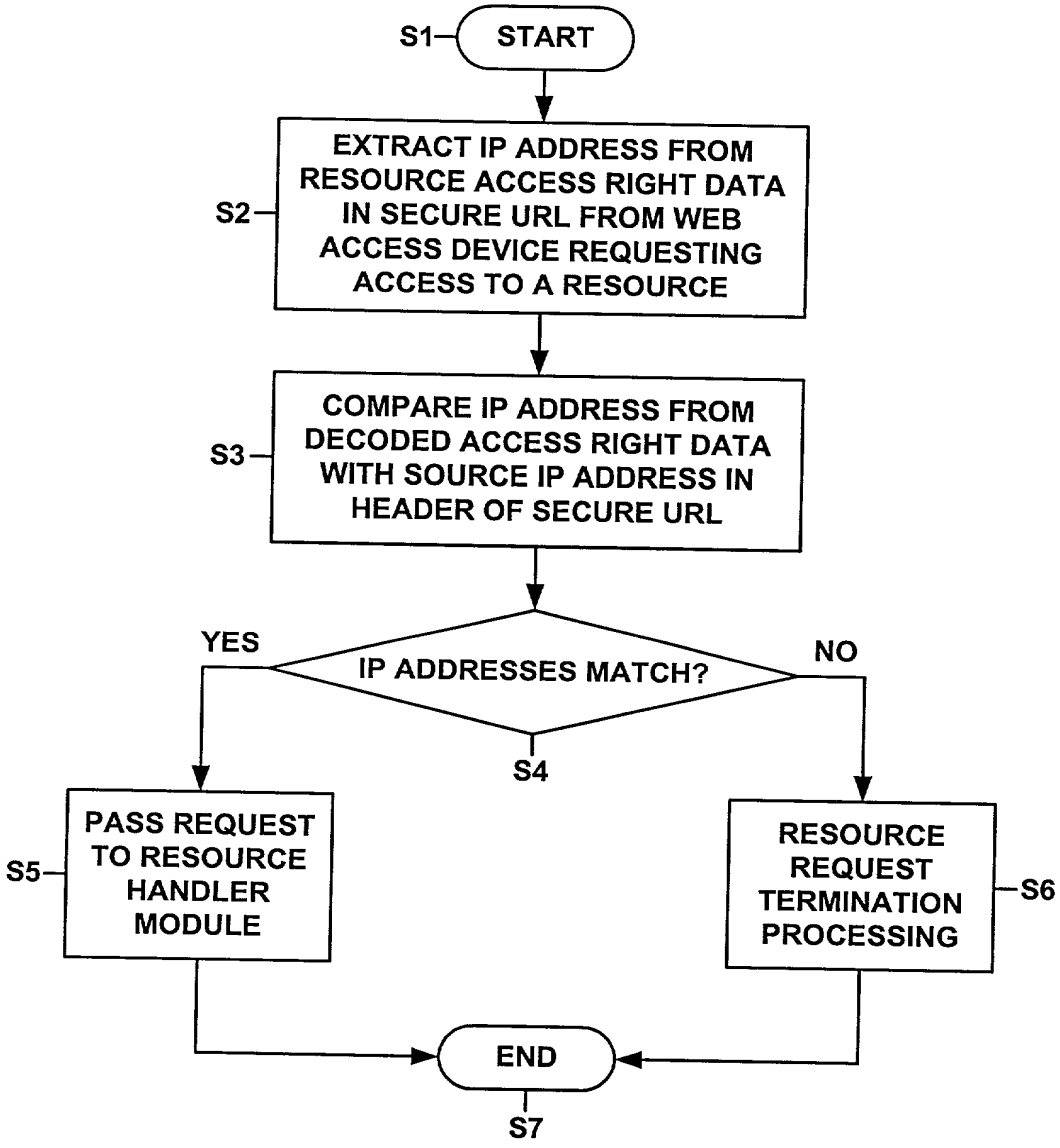


FIGURE 13B

CHECK FIELD FORMAT

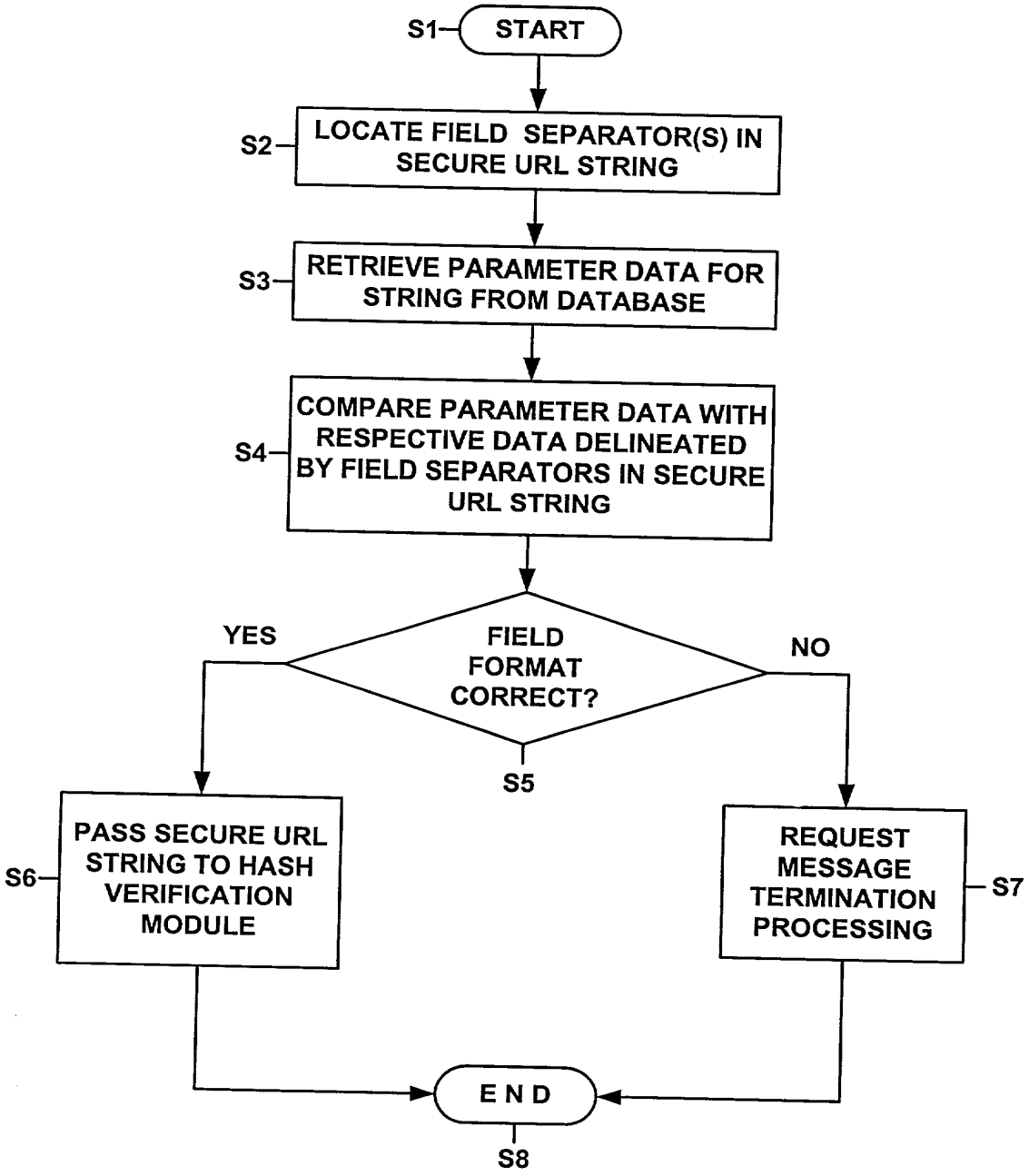


FIGURE 13C

KEY VALIDATION

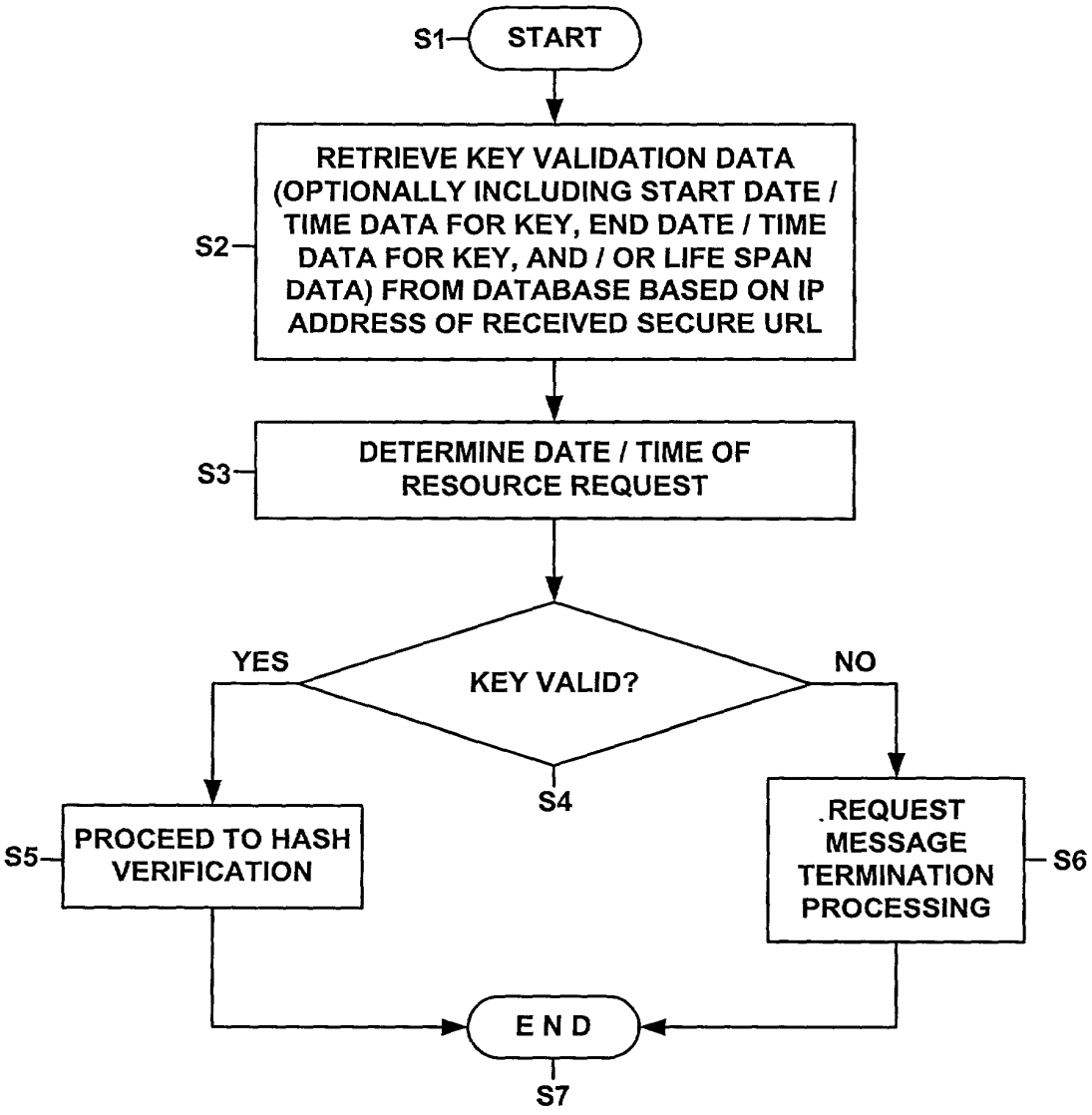


FIGURE 13D

HASH VERIFICATION

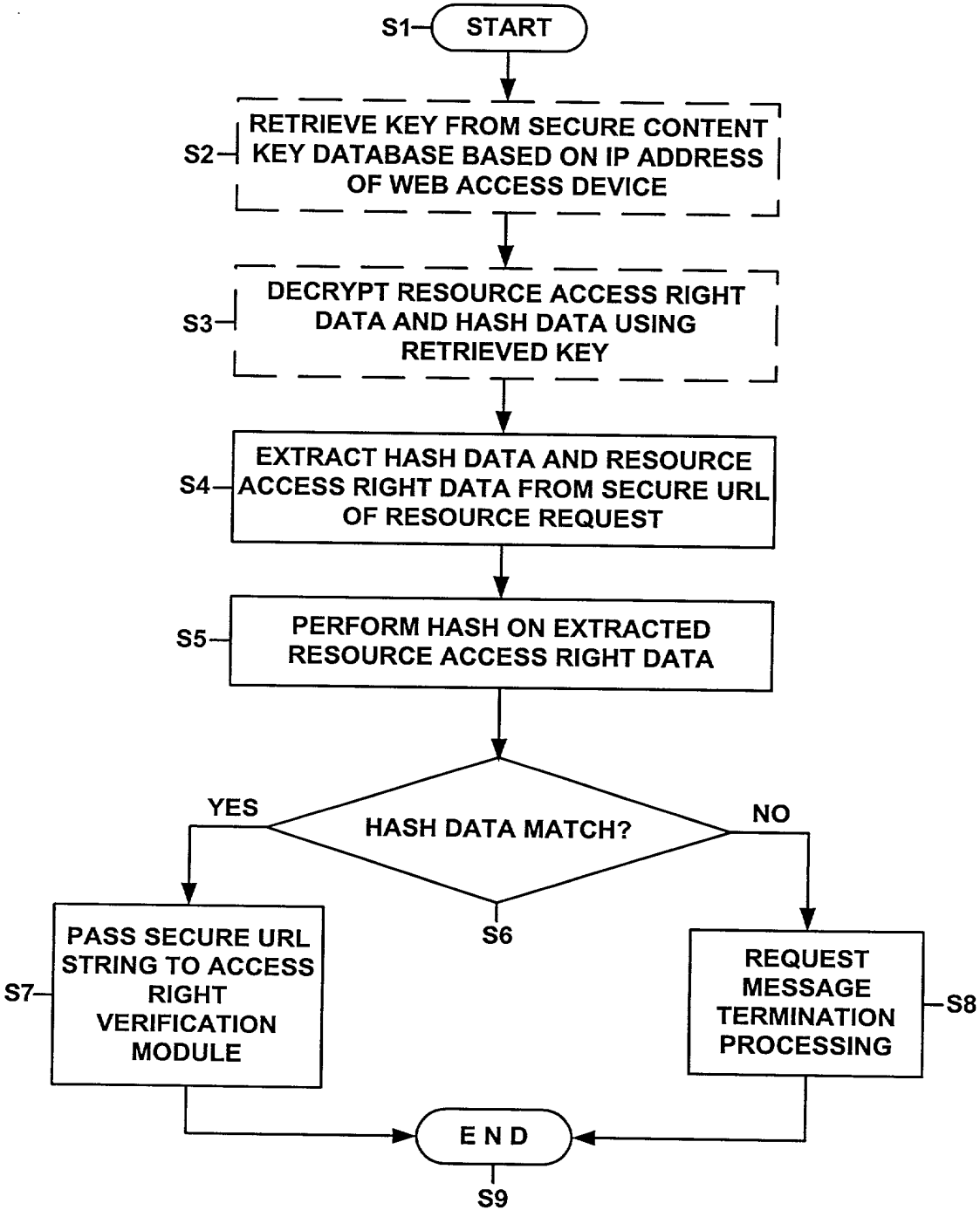


FIGURE 13E

RESOURCE ACCESS RIGHT VERIFICATION

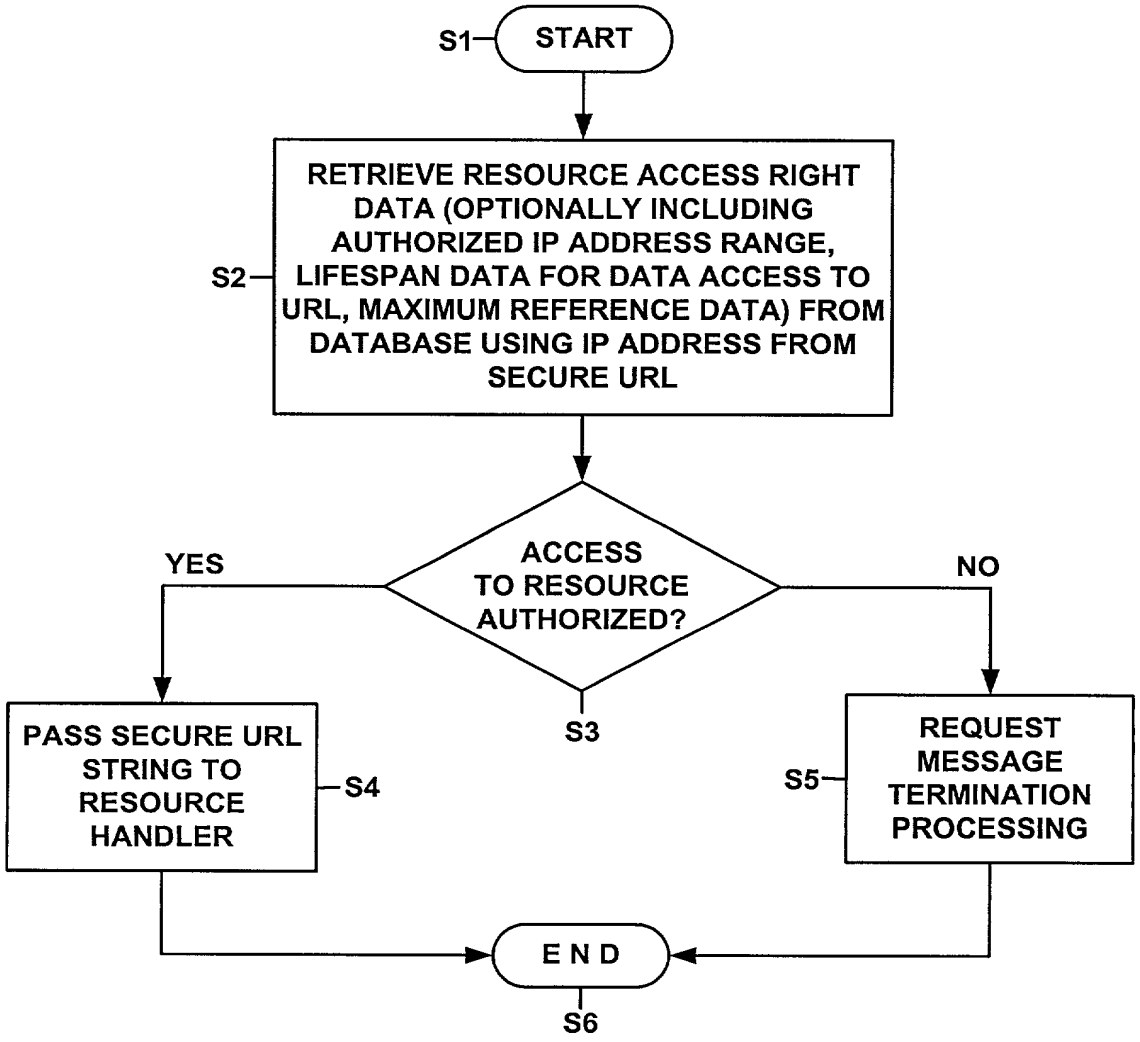


FIGURE 13F
RESOURCE ACCESS VERIFICATION

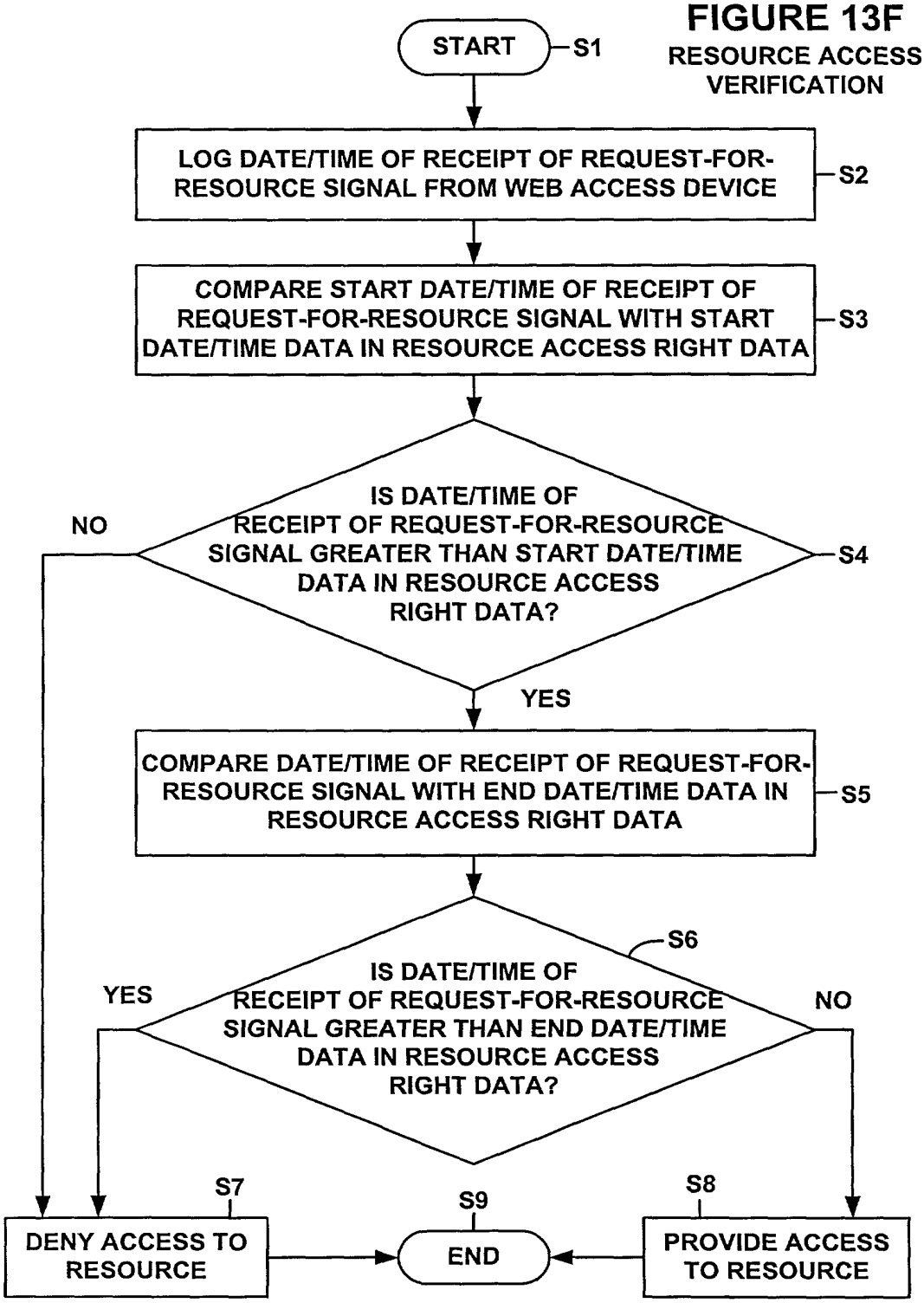
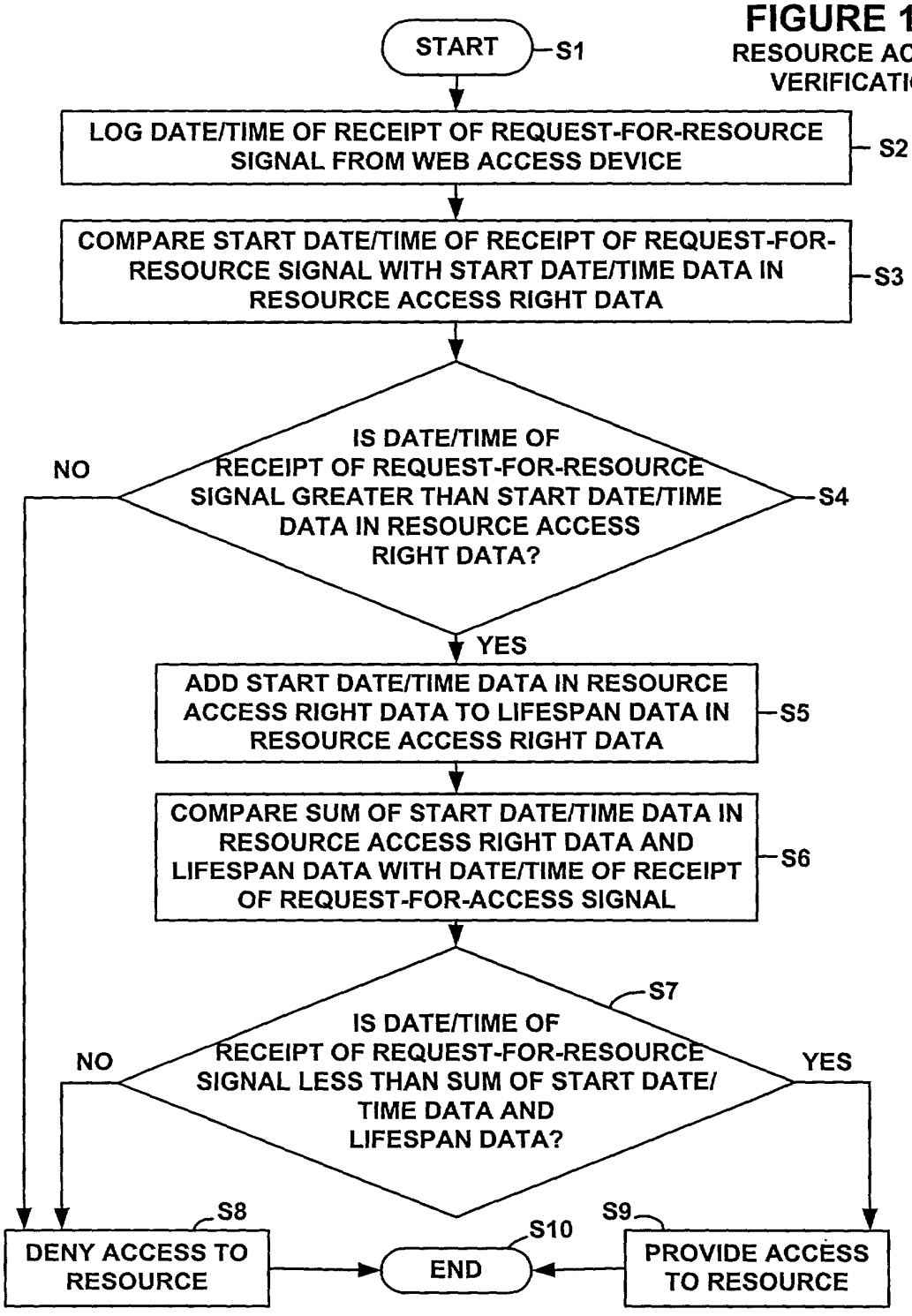


FIGURE 13G
RESOURCE ACCESS VERIFICATION



Patent Application Publication

FIGURE 13H

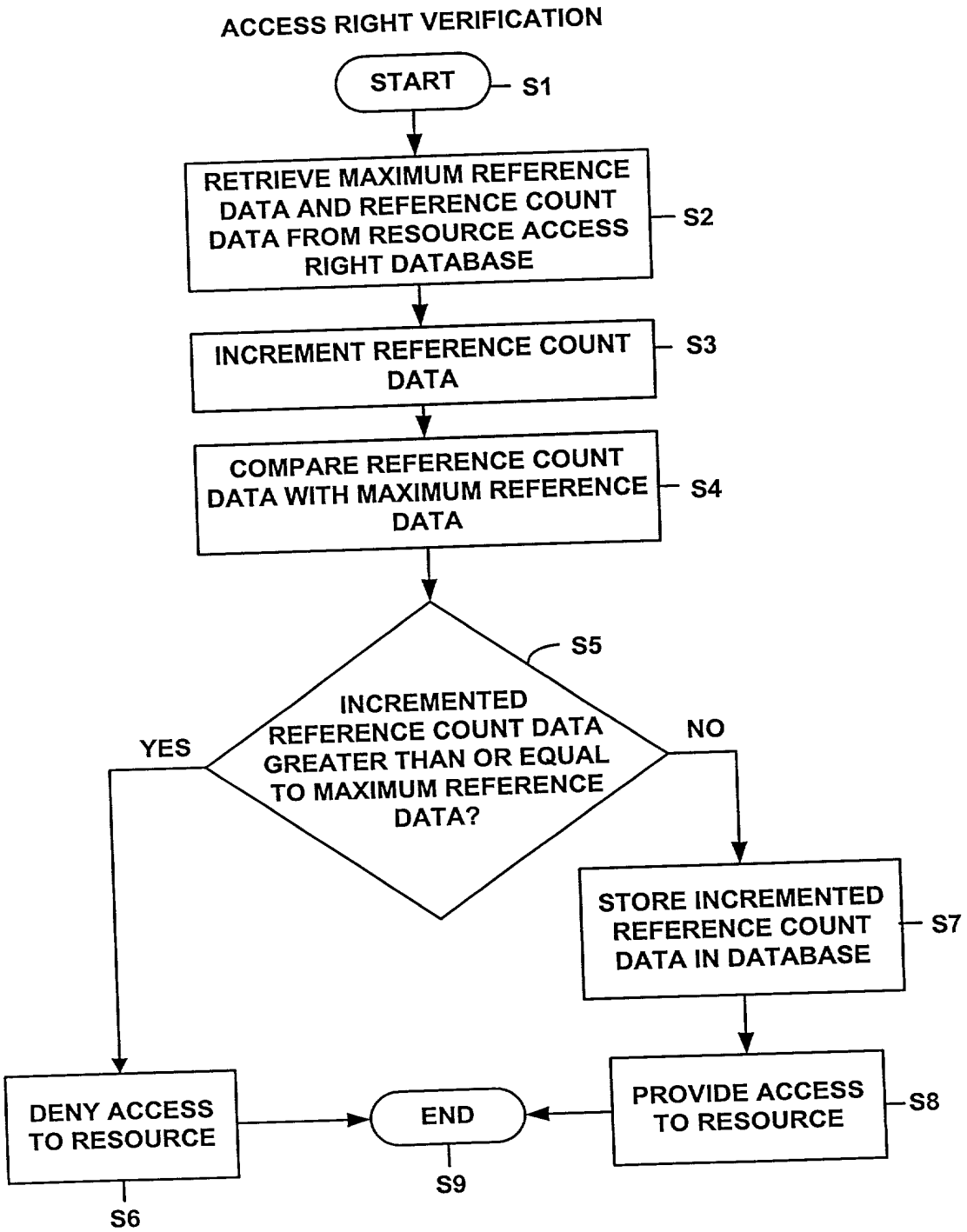

ACCESS RIGHT VERIFICATION
START
S1
RETRIEVE MAXIMUM REFERENCE DATA AND REFERENCE COUNT DATA FROM RESOURCE ACCESS RIGHT DATABASE
S2
INCREMENT REFERENCE COUNT DATA
S3
COMPARE REFERENCE COUNT DATA WITH MAXIMUM REFERENCE DATA
S4
S5
INCREMENTED REFERENCE COUNT DATA GREATER THAN OR EQUAL TO MAXIMUM REFERENCE DATA?
YES
NO
STORE INCREMENTED REFERENCE COUNT DATA IN DATABASE
S7
PROVIDE ACCESS TO RESOURCE
S8
DENY ACCESS TO RESOURCE
END
S9
S6

FIGURE 13I

RESOURCE ACCESS VERIFICATION

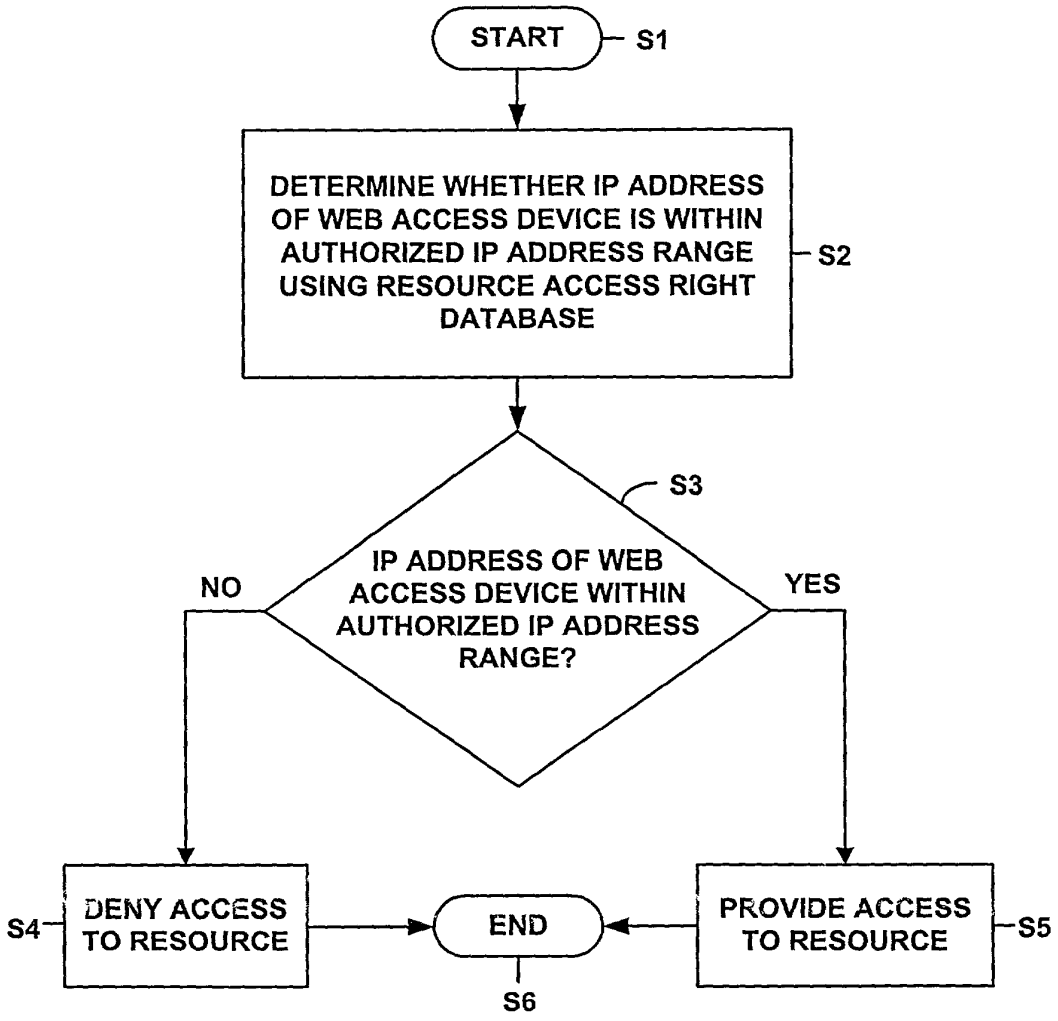


FIGURE 14

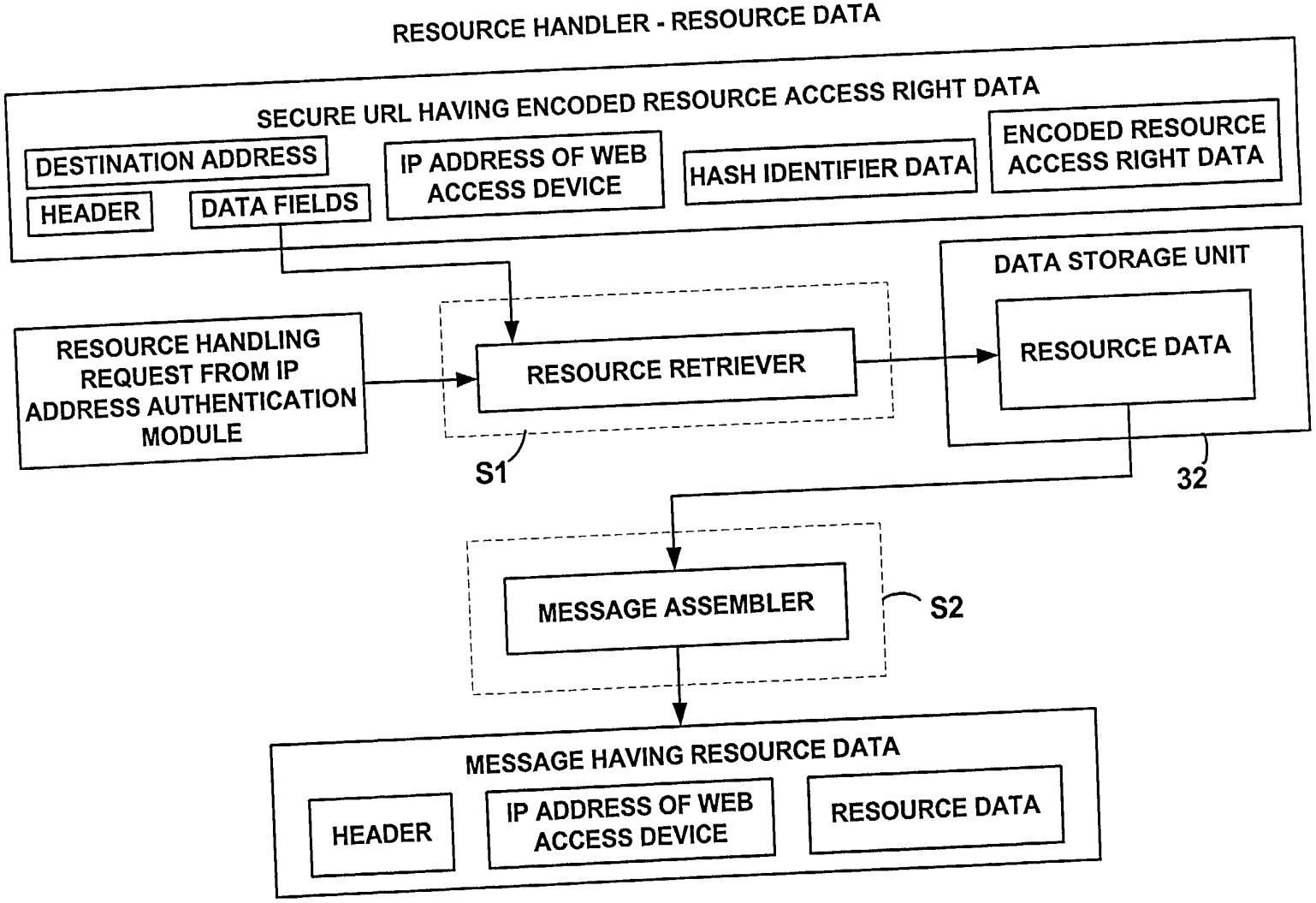

RESOURCE HANDLER - RESOURCE DATA
SECURE URL HAVING ENCODED RESOURCE ACCESS RIGHT DATA
DESTINATION ADDRESS
HEADER
DATA FIELDS
IP ADDRESS OF WEB ACCESS DEVICE
HASH IDENTIFIER DATA
ENCODED RESOURCE ACCESS RIGHT DATA
DATA STORAGE UNIT
RESOURCE HANDLING REQUEST FROM IP ADDRESS AUTHENTICATION MODULE
RESOURCE RETRIEVER
RESOURCE DATA
S1
32
MESSAGE ASSEMBLER
S2
MESSAGE HAVING RESOURCE DATA
HEADER
IP ADDRESS OF WEB ACCESS DEVICE
RESOURCE DATA

FIGURE 15

RESOURCE HANDLER - APPLICATION RESOURCE

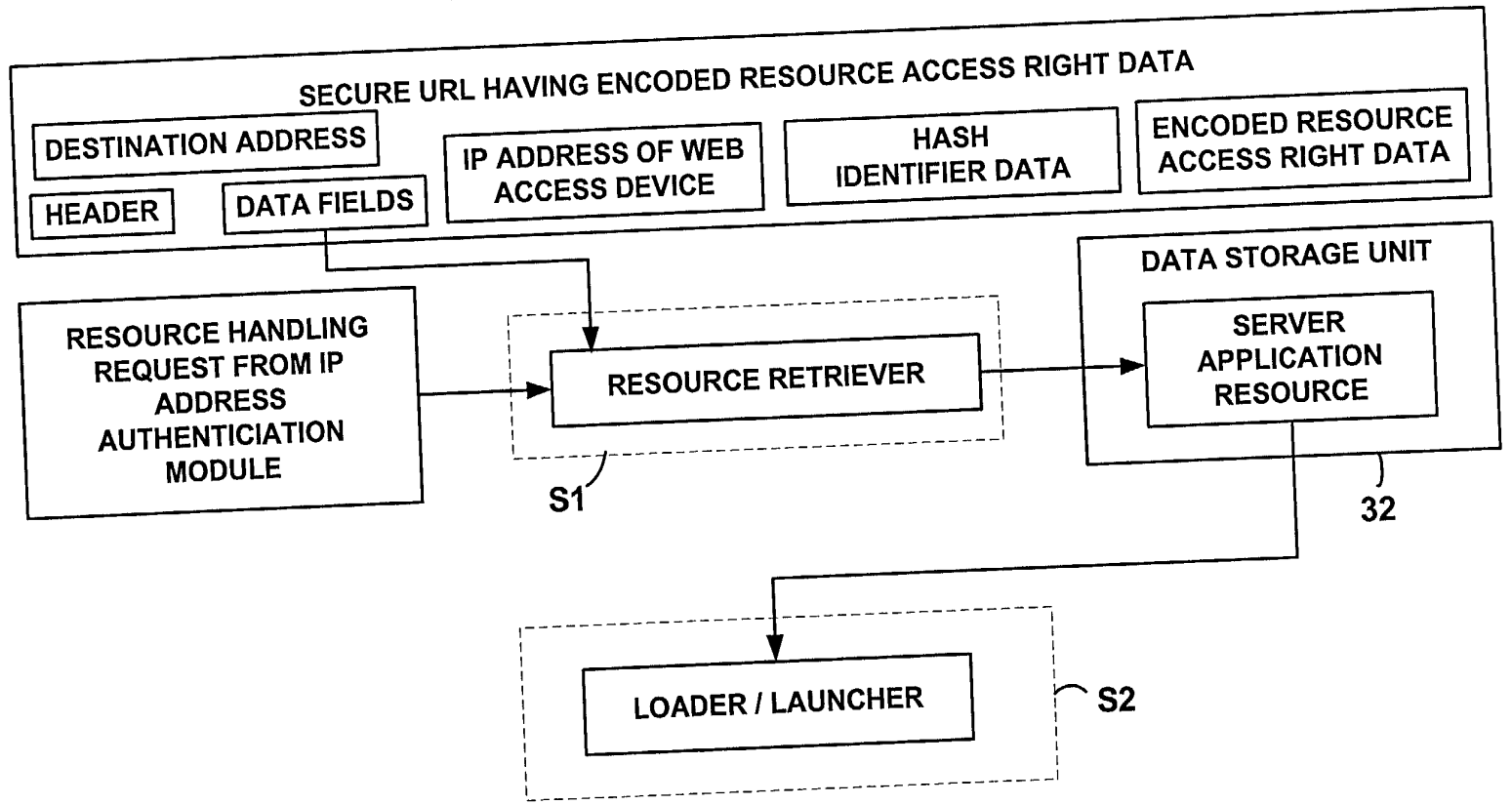
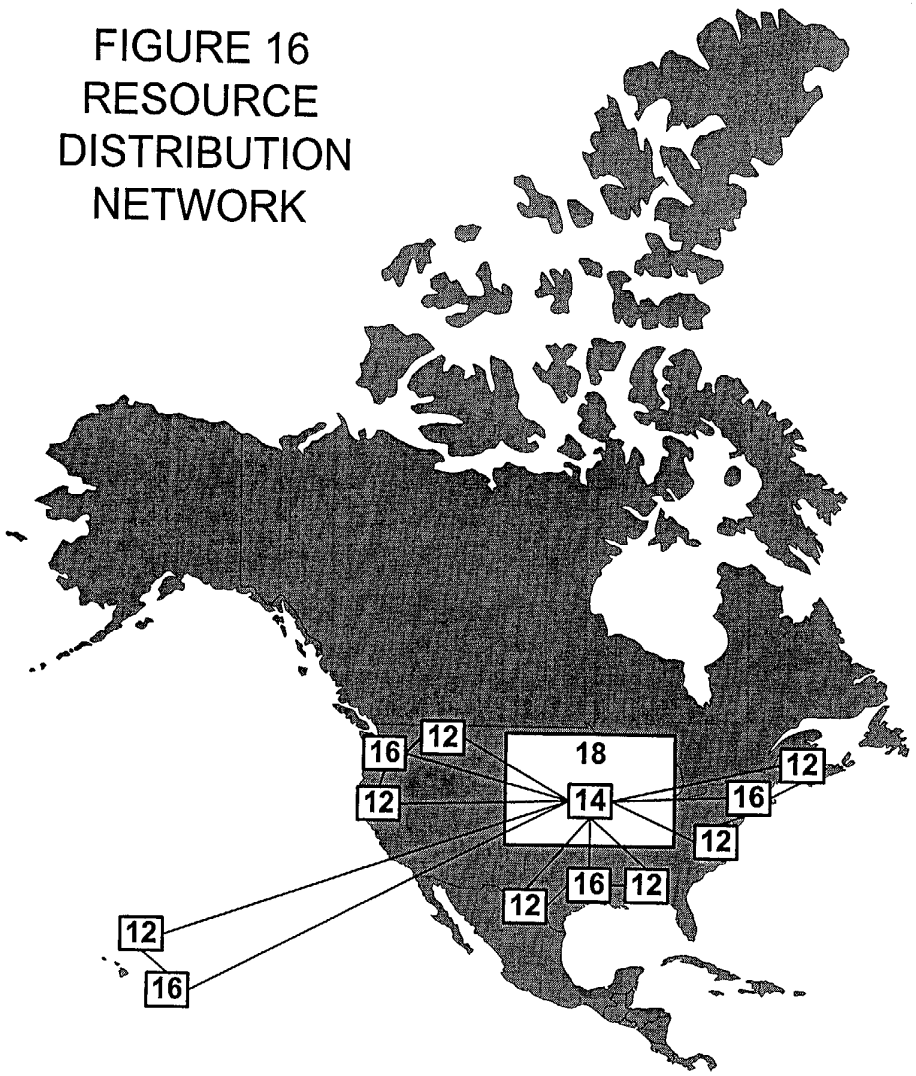



FIGURE 16
RESOURCE
DISTRIBUTION
NETWORK